# ASBMR Connect: Networking Breakfast with ASBMR Leaders, NIH Representatives and Senior Investigators

September 20, 2019, 06:45 AM W308/Orange County Convention Center

ASBMR Connect is supported in part by educational grants from Amgen, Inc. and Ultragenyx Pharmaceutical Inc.

The Networking Breakfast with ASBMR Leaders, NIH Representatives and Senior Investigators is a ticketed event that is part of the ASBMR Connect Program. ASBMR Connect requires advance registration and a separate ticket fee.

### **Registration Open**

September 20, 2019, 07:00 AM Valencia Ballroom Lobby/Orange County Convention Center

### Gerald D. Aurbach Lecture and Presentation of Esteemed Awards

September 20, 2019, 08:00 AM

Valencia Ballroom B-D/Orange County Convention Center

Join your colleagues to celebrate the following ASBMR 2019 Esteemed Award Winners: William F. Neuman Award, Paula Stern Achievement Award, Stephen M. Krane Award and Adele L. Boskey Award

#### From Genes to Genomes to Biology and Health

· Richard Lifton MD, PhD, Rockefeller University

September 20, 08:30 AM-09:30 AM

Valencia Ballroom B-D/Orange County Convention Center

### **Networking Break**

September 20, 2019, 09:30 AM Valencia Foyer/Orange County Convention Center

### Highlights of the ASBMR 2019 Annual Meeting

September 20, 2019, 10:00 AM

Valencia Ballroom B-D/Orange County Convention Center

- Dana Gaddy PhD, College of Veterinary Medicine, Texas A&M University, United States, Chair
- · Shonni Silverberg MD, Columbia University College of Physicians & Surgeons, United States, Chair
- Johannes Van Leeuwen PhD, Erasmus University Medical Center, Netherlands, Chair

This special session is of interest to all health professionals, first time meeting attendees, young investigators, individuals new to the field, nurses, clinical research study coordinators, physical therapists and/or those seeking guidance in navigating through the extensive ASBMR program.

#### **Clinical Science Overview**

 John Bilezikian MD, Columbia University College of Physicians and Surgeons, United States September 20, 10:00 AM-10:45 AM

Valencia Ballroom B-D/Orange County Convention Center

#### **Basic Science Overview**

Lynda Bonewald PhD, Indiana University School of Medicine, United States

September 20, 10:45 AM-11:30 AM

Valencia Ballroom B-D/Orange County Convention Center

# **Cutting Edge Concepts: Novel Approaches to Reducing Fractures**

September 20, 2019, 11:45 AM

W414/Orange County Convention Center

- Elizabeth Shane MD, Columbia University College of Physicians and Surgeons, United States, Chair
- Benjamin Leder MD, Massachusetts General Hospital Harvard Medical School, United States, Chair

#### **Bone Health TeleECHO**

• E. Michael Lewiecki MD, New Mexico Clinical Research & Osteoporosis Center, United States

September 20, 11:45 AM-12:10 PM

W414/Orange County Convention Center

#### Implementation Science and the Treatment of Osteoporosis

KEN SAAG MD, THE UNIVERSITY OF ALABAMA AT BIRMINGHAM, United States

September 20, 12:10 PM-12:35 PM

W414/Orange County Convention Center

#### Osteoporosis Medication Adherence: The Holy Grail

Deborah Gold PhD, Duke University Medical Center, United States

September 20, 12:35 PM-01:00 PM

W414/Orange County Convention Center

# **Cutting Edge Concepts: Role of Immunology in Bone Regeneration**

September 20, 2019, 11:45 AM

Valencia Ballroom A/Orange County Convention Center

- Laura Calvi MD, University of Rochester School of Medicine, United States, Chair
- Melissa Kacena PhD, Indiana University School of Medicine, United States, Chair

#### Osteoimmunology and the Role of Mast Cells in Fracture Repair

· Paul Martineau MD, McGill University, Canada

September 20, 11:45 AM-12:10 PM

Valencia Ballroom A/Orange County Convention Center

#### Role of Macrophage, Immunomodulation, Stem Cells and Bone Repair

Stuart Goodman MD, PhD, Stanford University

September 20, 12:10 PM-12:35 PM

Valencia Ballroom A/Orange County Convention Center

#### Rejuvenation in Fracture Repair: It's All In the Blood

Benjamin Alman MD, Duke University

September 20, 12:35 PM-01:00 PM

Valencia Ballroom A/Orange County Convention Center

# IFMRS Musculoskeletal Knowledge Portal and Artificial Intelligence in Musculoskeletal Medicine

September 20, 2019, 12:00 PM

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Making genetic data more broadly accessible and useful could have a significant impact on our ability to understand and treat musculoskeletal disease. Currently, there are barriers hindering the translation of these data into actionable knowledge. Learn more about the International Federation of Musculoskeletal Research Societies (IFMRS)

Musculoskeletal Knowledge Portal currently in development thatwill aggregate and integrate data and results from large-scale human genetic association studies of musculoskeletal diseases and make them available for query through a public web resource that protects individual level data or patient privacy.

Artificial intelligence (AI) research within medicine is growing rapidly. This session will also present the latest advances in AI technology in musculoskeletal medicine.

#### IFMRS Musculoskeletal Knowledge Portal

- Noel Burtt PhD, Broad Institute of MIT & Harvard
- Douglas Kiel MD, MPH, Hinda and Arthur Marcus Institute for Aging Research Hebrew SeniorLife, United States September 20, 12:00 PM-12:40 PM

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#### **Artificial Intelligence in Musculoskeletal Medicine**

Costas Bekas PhD, IBM Research, Switzerland

September 20, 12:40 PM-01:00 PM

W315/Orange County Convention Center

#### **Discussion**

September 20, 01:00 PM-01:15 PM

W315/Orange County Convention Center

### Meet the Award Winner: William F. Neuman Award Winner (2018)

September 20, 2019, 12:00 PM

W311 A/Orange County Convention Center

#### Meet-the-Award Winner: William F. Neuman Award Winner (2018)

· Vicki Rosen PhD, Harvard School of Dental Medicine, United States

September 20, 12:00 PM-01:00 PM

W311 A/Orange County Convention Center

# Meet the Professor: Acid-base Balance: Impact on Bone and Muscle

September 20, 2019, 12:00 PM

W311 B/Orange County Convention Center

#### Acid-base Balance: Impact on Bone and Muscle

Bess Dawson-Hughes MD, Tufts University, United States

September 20, 12:00 PM-01:00 PM

W311 B/Orange County Convention Center

### Meet the Professor: Epigenetics and Stem Cell Aging

September 20, 2019, 12:00 PM

W311 G/Orange County Convention Center

#### **Epigenetics and Stem Cell Aging**

· Andre Van Wijnen PhD, Mayo Clinic, United States

September 20, 12:00 PM-01:00 PM

W311 G/Orange County Convention Center

### Meet the Professor: Management of Bone in HIV

September 20, 2019, 12:00 PM W311 F/Orange County Convention Center

#### Management of Bone in HIV

 Michael Yin MD, Columbia University, United States September 20, 12:00 PM-01:00 PM
 W311 F/Orange County Convention Center

### Meet the Professor: Management of Fibrous Dysplasia

September 20, 2019, 12:00 PM W311 C/Orange County Convention Center

#### Management of Fibrous Dysplasia

 Alison Boyce MD, National Institutes of Health, United States September 20, 12:00 PM-01:00 PM
 W311 C/Orange County Convention Center

# Meet the Professor: Mechanical Loading of Bone and Anabolic Response

September 20, 2019, 12:00 PM

W311 D/Orange County Convention Center

Matthew Silva PhD, Washington University in St. Louis School of Medicine, United States, Presenter

#### **Mechanical Loading of Bone and Anabolic Response**

 Matthew Silva PhD, Washington University in St. Louis School of Medicine, United States September 20, 12:00 PM-01:00 PM
 W311 D/Orange County Convention Center

# Meet The Professor: Professional Development: Academic and Industry Career Path Preparation

September 20, 2019, 12:00 PM

W311 H/Orange County Convention Center

#### **Professional Development: Academic and Industry Career Path Preparation**

- Andreas Grauer MD, Amgen, United States
- Lorraine Fitzpatrick MD, Radius Pharm, United States

September 20, 12:00 PM-01:00 PM

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### Meet the Professor: Renal Bone Disease

September 20, 2019, 12:00 PM W312 C/Orange County Convention Center

#### **Renal Bone Disease**

 Thomas Nickolas MD, MS, Columbia University, United States September 20, 12:00 PM-01:00 AM
 W312 C/Orange County Convention Center

### Meet the Professor: Senescent Cells and Bone Formation

September 20, 2019, 12:00 PM W311 E/Orange County Convention Center

#### **Senescent Cells and Bone Formation**

 Joshua Farr PhD, Mayo Clinic, United States September 20, 12:00 PM-01:00 PM
 W311 E/Orange County Convention Center

### Meet the Professor: Sequential Drug Therapy for Osteoporosis

September 20, 2019, 12:00 PM

W312 AB/Orange County Convention Center

#### **Sequential Drug Therapy for Osteoporosis**

 Felicia Cosman MD, Columbia University College of Physicians and Surgeons, United States September 20, 12:00 PM-01:00 AM
 W312 AB/Orange County Convention Center

### **Networking Break**

September 20, 2019, 01:00 PM Valencia Foyer/Orange County Convention Center

# **Concurrent Orals: Musculoskeletal Disorders: Preclinical Studies**

September 20, 2019, 01:15 PM

Valencia Ballroom B-D/Orange County Convention Center

- Martine Cohen-Solal MD, PhD, Centre Viggo Petersen, France, Presenter
- · Abhishek Chandra PhD, Mayo Clinic, United States, Moderator

#### [1001] FGF23 in crosstalk of bone, kidney, and hematopoiesis in sickle cell bone disease

September 20, 01:15 PM-01:30 PM

Valencia Ballroom B-D/Orange County Convention Center

### [1002] The Hajdu Cheney Mutation Sensitizes Mice to the Osteolytic Actions of TNF $\alpha$

September 20, 01:30 PM-01:45 PM

Valencia Ballroom B-D/Orange County Convention Center

#### [1003] Guanylyl cyclase-B activation rescues achondroplasia in mice

September 20, 01:45 PM-02:00 PM

Valencia Ballroom B-D/Orange County Convention Center

# [1004] The Fibrodysplasia Ossificans Progressiva-causing ACVR1[R206H] and ACVR1[R258G] mutations exhibit distinct skeletal phenotypes in neonatal mice.

September 20, 02:00 PM-02:15 PM

Valencia Ballroom B-D/Orange County Convention Center

# [1005] Unraveling the mystery behind bone-cartilage crosstalk: Osteoclast-derived exosomal microRNAs deprive the resistance of cartilage to matrix degeneration, angiogenesis and innervation in osteoarthritis

September 20, 02:15 PM-02:30 PM

Valencia Ballroom B-D/Orange County Convention Center

### **Concurrent Orals: Osteoporosis Pathophysiology**

September 20, 2019, 01:15 PM

Valencia Ballroom A/Orange County Convention Center

- Julia (Julianna) Barsony MD, PhD, Georgetown University Medical Center, United States, Moderator
- Thomas Andersen PhD, University of Southern Denmark, Denmark, Moderator

### [1006] T cell-derived Dkk1 controls bone homeostasis and contributes to the pathogenesis of estrogen deficiency-induced bone loss

September 20, 01:15 PM-01:30 PM

Valencia Ballroom A/Orange County Convention Center

#### [1007] Glucocorticoids Induce Blood Vessel Senescence in Growing Long Bone

September 20, 01:30 PM-01:45 PM

Valencia Ballroom A/Orange County Convention Center

## [1008] Long Interspersed Element–1 (LINE-1) with retrosposon activity is necessary for osteoblast differentiation in vitro and is altered in postmenopausal osteoporotic bone

September 20, 01:45 PM-02:00 PM

Valencia Ballroom A/Orange County Convention Center

#### [1009] Sex Differences in Systemic Bone and Muscle Loss After Fracture in Mice

September 20, 02:00 PM-02:15 PM

Valencia Ballroom A/Orange County Convention Center

#### [1010] LIGHT/TNFSF14 is involved in estrogen deficiency-induced bone loss

September 20, 02:15 PM-02:30 PM

Valencia Ballroom A/Orange County Convention Center

### **Concurrent Orals: Regulators of Musculoskeletal Development**

September 20, 2019, 01:15 PM

W414/Orange County Convention Center

- Lamya Karim PhD, University of Massachusetts Dartmouth, United States, Moderator
- Robert Blank MD, PhD, Medical College of Wisconsin, Division of Endocrinology, United States, Moderator

#### [1011] Loss of Glut1 leads to intervertebral disc degeneration through upregulation of Hedgehog pathway

September 20, 01:15 PM-01:30 PM

W414/Orange County Convention Center

#### [1012] Heterozygous Deletion of Fzd2 Leads to Decreased Craniofacial Mineralization

September 20, 01:30 PM-01:45 PM

W414/Orange County Convention Center

#### [1013] Investigation of Wnt Receptor Fzd2 in Mouse Limb Development

September 20, 01:45 PM-02:00 PM

W414/Orange County Convention Center

#### [1014] Cntnap4 is a Novel Key Regulator for Development and Growth of Cranial Vault and Base

September 20, 02:00 PM-02:15 PM

W414/Orange County Convention Center

### [1015] Longitudinal genome-wide association study implicates novel loci and candidate genes for pediatric bone accrual

September 20, 02:15 PM-02:30 PM

W414/Orange County Convention Center

# **Concurrent Orals: Skeletal Maturation & Other Metabolic Bone Disorders**

September 20, 2019, 01:15 PM

W315/Orange County Convention Center

- Aliya Khan MD, McMaster University, Canada, Moderator
- Peter Tebben MD, Mayo Clinic, United States, Moderator

### [1016] Longitudinal Development of Peak Bone Mass in White U.S. Females: A View through 3 Maturational Lenses

September 20, 01:15 PM-01:30 PM

W315/Orange County Convention Center

#### [1017] Predictable Changes in Skeletal Maturation: An Assessment of Individual Trajectories

September 20, 01:30 PM-01:45 PM

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## [1018] Effect of Parathyroidectomy on Quality of Life: 10 Year Data from a Prospective Randomized Control Trial on Primary Hyperparathyroidism (the SIPH-study)

September 20, 01:45 PM-02:00 PM

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#### [1019] Six Years' Experience With Recombinant Human Parathyroid Hormone (1-84) in Chronic

#### Hypoparathyroidism: Renal and Skeletal Endpoints and Safety From the RACE Study

September 20, 02:00 PM-02:15 PM

W315/Orange County Convention Center

#### [1020] Aetiology, pathogenesis, and treatment of hypercalcemia after cosmetic paraffin oil injections

September 20, 02:15 PM-02:30 PM

W315/Orange County Convention Center

### **Networking Break**

September 20, 2019, 02:30 PM

Valencia Foyer/Orange County Convention Center

### **Concurrent Orals: Bone-Lipid Connection**

September 20, 2019, 02:45 PM

W414/Orange County Convention Center

- · Gustavo Duque MD, PhD, University of Melbourne, Australia, Moderator
- Elena Ambrogini, Central Arkansas VA Healthcare System, Univ of Arkansas for Medical Sciences, United States, Moderator

### [1021] Shared autonomic pathways connect bone marrow and peripheral adipose tissues across the central neuraxis

September 20, 02:45 PM-03:00 PM

W414/Orange County Convention Center

### [1022] Deletion of SREBF1, a functional bone-muscle pleiotropic gene, alters BMD and lipid signaling in zebrafish

September 20, 03:00 PM-03:15 PM

W414/Orange County Convention Center

#### [1023] Bone-derived sclerostin regulates Pdgfra+ adipoprogenitor cell differentiation.

September 20, 03:15 PM-03:30 PM

W414/Orange County Convention Center

## [1024] Osteoprogenitor glucocorticoid receptor function regulates bone maintenance, marrow fat accumulation, and bone-muscle crosstalk during aging

September 20, 03:30 PM-03:45 PM

W414/Orange County Convention Center

# [1025] Deletion of PPAR $\gamma$ in Mesenchymal Lineage Cells Protects Against Aging-Induced Cortical but Not Trabecular Bone Loss in Mice

September 20, 03:45 PM-04:00 PM

W414/Orange County Convention Center

### **Concurrent Orals: Hormonal Regulation**

September 20, 2019, 02:45 PM

W315/Orange County Convention Center

- Fadil Hannan PhD, University of Oxford, United Kingdom, Moderator
- · Beate Lanske PhD, Radius Health, Inc., United States, Moderator

[1026] Glucocorticoids disrupt skeletal angiogenesis through NF-κB transrepression of preosteoclast PDGF-BB transcription in young mice

September 20, 02:45 PM-03:00 PM

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[1027] Parathyroid Hormone augments EphrinB2 derived from OCL via increased RANKL expression in OB in Osteoclast/Osteoblast Coupling.

September 20, 03:00 PM-03:15 PM

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[1028] Structural Basis of Activation and Sustained Signaling by the PTH Receptor

September 20, 03:15 PM-03:30 PM

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[1029] Molecular concordance between the skeletal effects of PTH1RH223R overexpression and deletion of salt inducible kinases 2 and 3

September 20, 03:30 PM-03:45 PM

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[1030] Vitamin D receptor signaling prevents the adverse actions of glucocorticoid excess in bone, skeletal muscle, and the heart, by interfering with the atrogene pathway.

September 20, 03:45 PM-04:00 PM

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### Concurrent Orals: Microarchitecture and Mechanical Loading

September 20, 2019, 02:45 PM

Valencia Ballroom A/Orange County Convention Center

- Julia Hum PhD, Moderator
- · Jose Ferretti, Sr. PhD, National University of Rosario, Argentina, Moderator

[1031] Fatigue Failure of Cancellous Bone is Sensitive to an Unexpected Aspect of Microarchitecture: A Study with Bone Biomechanics and 3D Printing

September 20, 02:45 PM-03:00 PM

Valencia Ballroom A/Orange County Convention Center

[1032] Differential Transcriptomic Response to Unloading in Bones from Diversity Outbred Mouse Founder Strains

September 20, 03:00 PM-03:15 PM

Valencia Ballroom A/Orange County Convention Center

[1033] Transcription differs between cancellous and cortical bone with location and time after in vivo tibial loading

September 20, 03:15 PM-03:30 PM

Valencia Ballroom A/Orange County Convention Center

[1034] Osteoclast-Derived Iqf1 Is Required for Formation of Pagetic Bone Lesions In Vivo

September 20, 03:30 PM-03:45 PM

Valencia Ballroom A/Orange County Convention Center

[1035] Lrp4 mediates bone mass and mechanotransduction through interaction with sclerostin in vivo

September 20, 03:45 PM-04:00 PM

Valencia Ballroom A/Orange County Convention Center

# **Concurrent Orals: Rare Bone Diseases: Evaluation and Treatment**

September 20, 2019, 02:45 PM

Valencia Ballroom B-D/Orange County Convention Center

- Michael Econs MD, Indiana University School of Medicine, United States, Moderator
- · Rachel Gafni MD, National Institutes of Health, United States, Moderator

[1036] Burosumab resulted in better clinical outcomes than continuation with conventional therapy in younger and older children with X-linked hypophosphatemia

September 20, 02:45 PM-03:00 PM

Valencia Ballroom B-D/Orange County Convention Center

[1037] Continued Improvement in Clinical Outcomes with Long-term Burosumab, a Fully Human Anti-FGF23 Monoclonal Antibody: Results from a 3-year, Phase 2, Clinical Trial in Children with X-Linked Hypophosphatemia (XLH)

September 20, 03:00 PM-03:15 PM

Valencia Ballroom B-D/Orange County Convention Center

[1038] 18F-NaF PET/CT in Forty-four Patients with Fibrodysplasia Ossificans Progressiva Uncovers Highly-prevalent, Multifocal, Metabolically-Active Heterotopic Ossification, Largely Disassociated from Flare-ups September 20, 03:15 PM-03:30 PM

Valencia Ballroom B-D/Orange County Convention Center

[1039] Evolution of early Paget's disease in SQSTM1 mutation carriers: baseline analysis of the ZiPP study September 20, 03:30 PM-03:45 PM

Valencia Ballroom B-D/Orange County Convention Center

[1040] Setrusumab for the Treatment of Adults with Osteogenesis Imperfecta: 6-Month Data from the Open-Label Treatment Arm of the Phase 2b ASTEROID Study

September 20, 03:45 PM-04:00 PM

Valencia Ballroom B-D/Orange County Convention Center

### **Networking Break**

September 20, 2019, 04:00 PM Valencia Foyer/Orange County Convention Center

### **Basic Symposium: Exosomes and Extracellular Vesicles**

September 20, 2019, 04:15 PM

Valencia Ballroom A/Orange County Convention Center

- · Anna Teti PhD, University of L Aquila, Italy, Chair
- · Sarah Dallas PhD, University of Missouri Kansas City, United States, Chair

#### **Therapeutic and Diagnostic Options**

• Jan Lötvall PhD, University of Gothenburg, Sweden

September 20, 04:15 PM-04:40 PM

Valencia Ballroom A/Orange County Convention Center

#### Heparanase Regulation of Exosome Biogenesis and Function in Cancer

• Ralph Sanderson PhD, University of Alabama School of Medicine, United States

September 20, 04:40 PM-05:05 PM

Valencia Ballroom A/Orange County Convention Center

#### **Extracellular Vesicles in the Bone Context**

· Jeroen van de Peppel PhD, Erasmus Medical Center

Valencia Ballroom A/Orange County Convention Center

# ASBMR/ECTS Clinical Debate: Calcium and Vitamin D Should Routinely Be Part of Anti-osteoporosis Treatment Regimens

September 20, 2019, 04:30 PM

Valencia Ballroom B-D/Orange County Convention Center

- Ian Reid MD, University of Auckland, New Zealand, Chair
- Claus-C Glueer PhD, Christian Albrechts Universitaet zu Kiel, Germany, Chair

#### For the Motion (ECTS)

· Roger Bouillon MD, PhD, Katholieke Universiteit Leuven, Belgium

September 20, 04:30 PM-05:00 PM

Valencia Ballroom B-D/Orange County Convention Center

#### Against the Motion (ASBMR)

• Juliet Compston MD, University of Cambridge School of Clinical Medicine, United Kingdom

September 20, 05:00 PM-05:30 PM

Valencia Ballroom B-D/Orange County Convention Center

### Welcome Reception and Plenary Poster Session

September 20, 2019, 05:30 PM

West Hall C/Orange County Convention Center

Attendees and registered guests are invited to celebrate the ASBMR 2019 Annual Meeting during our Welcome Reception and Plenary Poster Session in the ASBMR Discovery Hall. Simply display your badge for admission. Guests may purchase a badge for \$50 at the ASBMR Registration Counter for entrance to the Welcome Reception.

# [FRI-1] Changes in Cortical Porosity and Bone Strength Through Four Years of rhPTH(1-84) Therapy in Hypoparathyroidism

September 20, 05:30 PM-07:00 PM

West Hall C/Orange County Convention Center

[FRI-2] In vivo detection of vasculature and fat within cortical bone pores: a validation study

September 20, 05:30 PM-07:00 PM

West Hall C/Orange County Convention Center

[FRI-3] An Overview of the Etiology, Clinical Manifestations, Management Strategies, and Complications of Hypoparathyroidism from the Canadian National Hypoparathyroidism Registry

September 20, 05:30 PM-07:00 PM

West Hall C/Orange County Convention Center

[FRI-5] Clinical, Biochemical and Radiological Profile of Normocalcaemic Hyperparathyroidism: a Multicentric Cross-Sectional Evaluation

September 20, 05:30 PM-07:00 PM

West Hall C/Orange County Convention Center

[FRI-8] Hypophosphatemic osteomalacia induced by long-term low-dose adefovir dipivoxil: Clinical characteristics of 140 cases

September 20, 05:30 PM-07:00 PM

West Hall C/Orange County Convention Center

[FRI-23] A Randomized Single Switch-Over Trial of Teriparatide for Premenopausal Idiopathic Osteoporosis: High Resolution Peripheral Computed Tomography (HR-pQCT) Changes at 24M

September 20, 05:30 PM-07:00 PM

West Hall C/Orange County Convention Center

#### [FRI-24] Removal of Advanced Glycation End-products In Vivo Rescues Bone Fragility

September 20, 05:30 PM-07:00 PM

West Hall C/Orange County Convention Center

### [FRI-25] Bone microarchitecture and strength in women living with HIV: A cross-sectional HR-pQCT study

September 20, 05:30 PM-07:00 PM

West Hall C/Orange County Convention Center

### [FRI-26] Pretreatment with Anti-Sclerostin Antibody has Lasting Osteogenic Effects on the Femur of Unloaded Male Rats

September 20, 05:30 PM-07:00 PM

West Hall C/Orange County Convention Center

#### [FRI-29] Mineral deposition is required to repair diffuse damage in bone in vivo

September 20, 05:30 PM-07:00 PM

West Hall C/Orange County Convention Center

### [FRI-30] Material Properties of Cortical Bone Do Not Differ between Donors with and without Type 2 Diabetes

September 20, 05:30 PM-07:00 PM

West Hall C/Orange County Convention Center

#### [FRI-32] Zoledronate and Raloxifene Combination Therapy Enhances Material Properties of Mouse Bone

September 20, 05:30 PM-07:00 PM

West Hall C/Orange County Convention Center

### [FRI-36] MB-SWIFT MRI can Quantify Bone Mineral Density while Concurrently Characterizing Material-level and Biochemical Changes in Bone In Vivo

September 20, 05:30 PM-07:00 PM

West Hall C/Orange County Convention Center

### [FRI-37] Non-obese Type 2 Diabetic Murine Model Exhibits Altered Matrix Quality and Material Properties

September 20, 05:30 PM-07:00 PM

West Hall C/Orange County Convention Center

### [FRI-73] Maternal pregnancy vitamin D supplementation is associated with greater offspring bone mineral density at 4 years: findings from the MAVIDOS trial

September 20, 05:30 PM-07:00 PM

West Hall C/Orange County Convention Center

#### [FRI-75] Molecular Mechanisms for Pamidronate Rescue of Post-burn Muscle Loss in Children

September 20, 05:30 PM-07:00 PM

West Hall C/Orange County Convention Center

### [FRI-84] Silicon Oxynitride Coatings Enhance Bone Healing by Inducing Antioxidant Biomarkers in Mandibular Implants

September 20, 05:30 PM-07:00 PM

West Hall C/Orange County Convention Center

#### [FRI-85] Mast Cell Deficiency Partially Mitigates Acute Bone Resorption Following Muscle Paralysis

September 20, 05:30 PM-07:00 PM

West Hall C/Orange County Convention Center

### [FRI-86] WNT3a levels decline during aging and further decline in osteoporotic women-Implications for Bone-Muscle Crosstalk

September 20, 05:30 PM-07:00 PM

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#### [FRI-90] Biglycan Regulates Inflammation and Bone Formation During Fracture Healing

September 20, 05:30 PM-07:00 PM

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#### [FRI-91] Osteocalcin ameliorates the cognitive dysfunctions in APP/PS1 mice

September 20, 05:30 PM-07:00 PM

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### [FRI-92] The Muscle Metabolite, β-aminoisobutyric acid, L-BAIBA, Enhances the Effects of Suboptimal Mechanical Loading on New Bone Formation.

September 20, 05:30 PM-07:00 PM

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#### [FRI-93] Distinctive role of muscle-specific ubiquitin ligases in bone microarchitecture

September 20, 05:30 PM-07:00 PM

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### [FRI-96] Impaired PTH-stimulated periosteal proliferation, Wnt activity and fracture healing in Fgf2 knockout mice

September 20, 05:30 PM-07:00 PM

West Hall C/Orange County Convention Center

### [FRI-124] Sclerostin antibody normalizes decreased trabecular bone and increased bone marrow adipose tissue caused by whole-body irradiation in mice

September 20, 05:30 PM-07:00 PM

West Hall C/Orange County Convention Center

#### [FRI-135] PREX1 drives spontaneous bone metastasis of ER+ breast cancer cells

September 20, 05:30 PM-07:00 PM

West Hall C/Orange County Convention Center

#### [FRI-136] TBK1/IKKε inhibitor Amlexanox blocks Multiple Myeloma cell growth in vitro and in vivo

September 20, 05:30 PM-07:00 PM

West Hall C/Orange County Convention Center

#### [FRI-138] Circulating osteocalcin-positive cells predict the progression of breast cancer bone metastasis

September 20, 05:30 PM-07:00 PM

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#### [FRI-141] The Role of Integrin α2β1 in Breast Cancer Metastasis to Bone

September 20, 05:30 PM-07:00 PM

West Hall C/Orange County Convention Center

### [FRI-142] Activation of Osteoblast Parathyroid Hormone 1 Receptor (PTH1R) Mobilizes Monocytic Myeloid-Derived Suppressor Cells (MDSC) from the Bone Marrow Tumor Hosts

September 20, 05:30 PM-07:00 PM

West Hall C/Orange County Convention Center

#### [FRI-143] The role of the SCF/c-kit pathway in cancer-induced bone pain

September 20, 05:30 PM-07:00 PM

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### [FRI-145] Parathyroid Hormone Receptor Signaling Mediates Breast Cancer Metastasis to Bone in Mice

September 20, 05:30 PM-07:00 PM

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#### [FRI-147] HIF Signaling Drives Spontaneous Dissemination of Breast Cancer Cells to Bone

September 20, 05:30 PM-07:00 PM

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#### [FRI-174] DDRGK1 is required for the proper chondrogenesis and the regulation of osteochondroprogenitors

September 20, 05:30 PM-07:00 PM

West Hall C/Orange County Convention Center

### [FRI-175] Pinch regulates chondrogenesis by control of TGF-β1 signaling and expression of Sox9 and Runx2 in chondrocytes

September 20, 05:30 PM-07:00 PM

West Hall C/Orange County Convention Center

#### [FRI-178] Growth plate borderline chondrocytes behave as transient mesenchymal precursor cells

September 20, 05:30 PM-07:00 PM

West Hall C/Orange County Convention Center

### [FRI-179] Changes in 3D Genome Architecture During Chondrocyte Differentiation in the Pathogenesis of Human Chondrodysplasias

September 20, 05:30 PM-07:00 PM

West Hall C/Orange County Convention Center

### [FRI-180] TGF-β/Alk5 signaling regulates the senescence of articular cartilage superficial cells and preventing osteoarthritis initiation

September 20, 05:30 PM-07:00 PM

West Hall C/Orange County Convention Center

## [FRI-181] Runx1 Mediates Articular Cartilage Repair in Osteoarthritis through Upregulating Yap and Downregulating Wnt/β-catenin Signaling Pathway

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#### [FRI-202] A case of adult hypophosphatasia with prominent periarticular calcification

September 20, 05:30 PM-07:00 PM

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### [FRI-204] First Report of Burosumab (Anti-FGF23 Monoclonal Antibody) for Rickets Complicating HRAS-

### Associated Cutaneous Skeletal Hypophosphatemia Syndrome

September 20, 05:30 PM-07:00 PM

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## [FRI-205] Bisphosphonate-Associated Osteonecrosis Of Jaw (BONJ) Healed With Teriparatide In A Female With Skeletal Metastasis From Breast Cancer (Treated With Radiation Therapy And Zolendronic Acid)

September 20, 05:30 PM-07:00 PM

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#### [FRI-208] A Unique Cause of Hypercalcemia

September 20, 05:30 PM-07:00 PM

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## [FRI-219] Housing temperature influences bone and brown adipose tissue side effects of atypical antipsychotic drugs in female mice

September 20, 05:30 PM-07:00 PM

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#### [FRI-220] Connexin43 Favors Body Adiposity and Glucose Tolerance in Mice

September 20, 05:30 PM-07:00 PM

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# [FRI-222] Inhibition of the Mitochondrial Permeability Transition via Cyclophilin D Knock-Out Stimulates Osteoprogenitors and Accelerates Bone Fracture Repair

September 20, 05:30 PM-07:00 PM

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# [FRI-223] Dysregulated Adiponectin Signalling via AdipoR1 Deletion Leads to Bone Loss and Increased Marrow Adiposity In Vivo Through Distinct Local and Systemic Mechanisms and in Contrast to Epidemiological Evidence

September 20, 05:30 PM-07:00 PM

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#### [FRI-236] Identification of Genetic Variants for Peak Bone Mineral Content in Young Adult Women

September 20, 05:30 PM-07:00 PM

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#### [FRI-237] Leveraging Unconfounded Genetic Risk Scores to Stratify Fracture Risk by Age at Onset

September 20, 05:30 PM-07:00 PM

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### [FRI-238] Lipidomic and Metabolomic Profiles in Women with Low and High Bone Mineral Density: Searching for Early Serum Metabolic Biomarkers for Osteoporosis Risk

September 20, 05:30 PM-07:00 PM

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### [FRI-239] CRISPR-Cas9 mediated genome editing confirms EPDR1 as an effector gene at the BMD GWAS-implicated 'STARD3NL' locus

September 20, 05:30 PM-07:00 PM

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#### [FRI-240] Genome-wide association meta-analysis identifies six loci for osteocalcin levels

September 20, 05:30 PM-07:00 PM

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### [FRI-257] Osteocyte Sirt6 has crucial roles in bone and phosphate metabolism through senescence- dependent and -independent manner.

September 20, 05:30 PM-07:00 PM

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#### [FRI-258] C-FGF23 peptide protects against severe hypoferremia during acute inflammation

September 20, 05:30 PM-07:00 PM

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#### [FRI-259] Repetitive Mild Traumatic Brain Injury Impairs Fracture Healing in Mice

September 20, 05:30 PM-07:00 PM

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# [FRI-263] CXCL12 Deletion in Osteoprogenitors Causes a Dramatic, Albeit Balanced, Increase in the Rate of Bone Remodeling and Attenuates the Loss of Cortical Bone Mass Caused by Estrogen Deficiency in Mice

September 20, 05:30 PM-07:00 PM

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### [FRI-264] Fetal FGF23 is required only to defend against hyperphosphatemia induced by maternal phosphate loading

September 20, 05:30 PM-07:00 PM

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#### [FRI-285] Mechanoresponsive MiR-138-5p Targets MACF1 to Inhibit Bone Formation

September 20, 05:30 PM-07:00 PM

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### [FRI-286] Sptbn1 disruption increases osteocyte membrane fragility, leading to impaired cell viability and a blunted mechanotransduction response following mechanical loading

September 20, 05:30 PM-07:00 PM

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### [FRI-287] Irisin Attenuates Osteoarthritis by Inhibiting Apoptosis of Osteocyte through Activating Erk Signaling Pathway

September 20, 05:30 PM-07:00 PM

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# [FRI-289] 3D multiplexed imaging for multi-scale finite element analysis to examine bone mechanotransduction and heterogeneous activation of β-catenin signaling in osteocytes

September 20, 05:30 PM-07:00 PM

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### [FRI-292] Fluid flow through the lacunocanalicular network and mechanoresponsiveness in a mouse tibial model

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## [FRI-309] PTHrP Overexpression in Transgenic Mammary Tumors Causes Anorexia and White Adipose Tissue Lipolysis

September 20, 05:30 PM-07:00 PM

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### [FRI-311] Bone matrix miR-125b inhibits bone resorption without affecting skeletal development and improves age-related changes in bone mass and quality

September 20, 05:30 PM-07:00 PM

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# [FRI-315] Abaloparatide exhibits greater osteo-anabolic response and higher cAMP stimulation and β-arrestin recruitment than teriparatide

September 20, 05:30 PM-07:00 PM

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### [FRI-316] Treatment with an anti-PTHR1 mAb normalizes calcium levels and prevents weight loss in a transgenic mouse model of HHM.

September 20, 05:30 PM-07:00 PM

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#### [FRI-317] FGF23 Levels are Elevated in a Mouse Model of HHM

September 20, 05:30 PM-07:00 PM

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### [FRI-337] Improved Skeletal Phenotype And Accelerated Intramembranous Bone Healing Post Tooth Extraction in Alox5 Knockout Senescent Female Mice

September 20, 05:30 PM-07:00 PM

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## [FRI-338] D3Cr muscle mass, DXA appendicular lean mass (ALM), and their relationships with "bone quality" and "muscle quality" in older men

September 20, 05:30 PM-07:00 PM

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## [FRI-339] Interplay between microRNAs and senescence-associated genes that regulate age- and radiotherapy-related bone damage

September 20, 05:30 PM-07:00 PM

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### [FRI-341] Age-associated Increase in Kynurenine linhibits Autophagy and Promotes Senescence and Apoptosis in Bone Marrow Mesenchymal Stem Cells

September 20, 05:30 PM-07:00 PM

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#### [FRI-351] IRS1 and IRS2 are integral for longitudinal bone growth

September 20, 05:30 PM-07:00 PM

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#### [FRI-352] Usp53, a PTH target regulating cell lineage fate and bone turnover

September 20, 05:30 PM-07:00 PM

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#### [FRI-353] Loss of preBCR components affects the homeostasis of cranial bone

September 20, 05:30 PM-07:00 PM

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### [FRI-354] Emergence of an early osteoporotic phenotype in male Down syndrome mice resulting from aberrant trisomic Dyrk1a expression

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#### [FRI-356] Bromodomain-containing Protein Brd4 is Required for Proper Skeletal Formation

September 20, 05:30 PM-07:00 PM

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### [FRI-357] Prevention of ectopic calcification by MGP: The role of its conserved residues

September 20, 05:30 PM-07:00 PM

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### [FRI-358] Aberrant muscle tissue repair by mutant ACVR1 FOP progenitor cells

September 20, 05:30 PM-07:00 PM

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#### [FRI-361] Loss of ZIP10 in osteoblasts and chondrocytes impairs skeletal development and growth.

September 20, 05:30 PM-07:00 PM

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### [FRI-386] Eif2ak4/GCN2 maintains bone homeostasis through regulation of skeletal stem cell proliferation

September 20, 05:30 PM-07:00 PM

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### [FRI-387] Wnt responsive progenitor cells contribute to osseointegration of implants in lone bone.

September 20, 05:30 PM-07:00 PM

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### [FRI-388] Characterization of a novel perivascular DMP1+ osteoprogenitor associated with trans-cortical channels of long bone

September 20, 05:30 PM-07:00 PM

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# [FRI-390] Transgenic mice with improved spatiotemporal knockdown of Hdac3 in osteoprogenitor cells demonstrate low bone mass, high marrow fat, and osteoblastic lipid storage

September 20, 05:30 PM-07:00 PM

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### [FRI-392] The chemokine Cxcl12 regulates the bone mesenchymal/stromal cell homeostasis and marrow vascular morphogenesis

September 20, 05:30 PM-07:00 PM

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#### [FRI-394] Epigenetic Regulation of Bone Regeneration in Inflammation Disease

September 20, 05:30 PM-07:00 PM

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### [FRI-395] Differential Response of Superior and Dura Periosteum to Intermittent Treatment of Teriparatide in Cranial Bone Defect Repair

September 20, 05:30 PM-07:00 PM

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### [FRI-418] CRISPR/Cas9-mediated ablation of osteoarthritis-associated genes attenuates osteoarthritis progression

September 20, 05:30 PM-07:00 PM

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# [FRI-420] Microstructural analysis of subchondral trabecular bone in patients with osteoarthritis of the knee using second-generation high-resolution peripheral quantitative computed tomography (HR-pQCT)

September 20, 05:30 PM-07:00 PM

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#### [FRI-421] PDGF-BB Secreted by Pre-Osteoclasts Drives Subchondral bone Angiogenesis in OA Joints

September 20, 05:30 PM-07:00 PM

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### [FRI-424] Deficiency of mesenchymal miR-204/miR-211 induces multifaceted pathologic changes of osteoarthritis

September 20, 05:30 PM-07:00 PM

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#### [FRI-440] Truncating Mutations in Recql4 Cause a Low Bone Mass Phenotype, but Not Osteosarcoma

September 20, 05:30 PM-07:00 PM

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## [FRI-441] Autophagy Suppression by Atg5 Deletion Led to Osteopenia in Mice through mTORC1 Downregulation

September 20, 05:30 PM-07:00 PM

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### [FRI-442] Macrophage-Lineage TRAP+ Cells Recruit Periosteum-Derived Cells for Periosteal Osteogenesis and Regeneration

September 20, 05:30 PM-07:00 PM

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### [FRI-443] Zbtb40 Loss-of-Function Inhibits Osteoblast Mineralization, Affecting Lumbar Spine Bone Mass in Mice

September 20, 05:30 PM-07:00 PM

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### [FRI-446] Local administration of soluble Frizzled2 accelerates bony callus formation during bone fracture repair process in a mouse model

September 20, 05:30 PM-07:00 PM

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# [FRI-448] Conditional Ablation of mTOR in Early Stages of Osteoblast Lineage Results in Defective Skeletogenesis through the Regulation of PI3K/AKT-mediated Chondrocyte Terminal Differentiation

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#### [FRI-450] Interleukin-6 signaling in osteoblasts promotes osteoclast differentiation

September 20, 05:30 PM-07:00 PM

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## [FRI-451] APP promotes osteoblast survival and bone formation by regulating mitochondrial function and preventing oxidative stress

September 20, 05:30 PM-07:00 PM

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## [FRI-453] Targeted deletion of Bmal1 in osteoblast causes differential effects on trabecular and cortical bone via BMP2 signaling pathway

September 20, 05:30 PM-07:00 PM

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# [FRI-454] The Constitutive Photomorphogenesis 9 (COP9) Signalosome (CSN) Complex is Required for Proper Postnatal Skeletal Growth

September 20, 05:30 PM-07:00 PM

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#### [FRI-458] Osteoblast-derived Wnt1 regulates cortical bone mass in adult mice

September 20, 05:30 PM-07:00 PM

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#### [FRI-461] Tiki Regulates Bone Mass via the Inhibition of Wnt Signaling

September 20, 05:30 PM-07:00 PM

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#### [FRI-504] Tethering Function of Mitofusin2 Controls Osteoclast Differentiation

September 20, 05:30 PM-07:00 PM

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#### [FRI-505] Osteoclasts are a target of the sympathetic nervous system

September 20, 05:30 PM-07:00 PM

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#### [FRI-506] The CaV1.2 L-type calcium channel regulates bone homeostasis in the middle and inner ear

September 20, 05:30 PM-07:00 PM

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### [FRI-508] Identification of RBP-J/NFATc1-miR182 as a novel network regulating inflammatory osteoclastogenesis and bone resorption

September 20, 05:30 PM-07:00 PM

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### [FRI-509] Osteoclasts promote trabecular bone formation through the suppression of sclerostin expression

September 20, 05:30 PM-07:00 PM

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#### [FRI-510] Disruption of Heparan Sulfate-RAGE Interaction Impairs Osteoclastogenesis

September 20, 05:30 PM-07:00 PM

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### [FRI-514] Slit-ROBO Rho GTPase Activating Protein 2 (SRGAP2) in Osteoclasts Limits Inflammatory Osteoclastogenesis and Inhibits Expression of the Coupling Clastokine SLIT3

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### [FRI-515] Ga13 restrains osteoclast function by cytoskeletal and mitochondrial regulation

September 20, 05:30 PM-07:00 PM

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### [FRI-518] Hematopoietic stem cell-independent erythromyeloid progenitors in the yolk-sac give rise to osteoclasts contributing to the postnatal bone remodeling

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### [FRI-519] HES1 is a Novel Determinant of Osteoclast Differentiation

September 20, 05:30 PM-07:00 PM

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### [FRI-557] Regulatory mechanism of bone formation via Wnt/beta-catenin signaling by long non-coding RNA in osteocytes

September 20, 05:30 PM-07:00 PM

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### [FRI-558] PPARγ Regulation of Osteocyte Fuel Dependency and Capacity Contributes to the Balance of Systemic Energy Metabolism

September 20, 05:30 PM-07:00 PM

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#### [FRI-559] Osteocyte Oxidative Stress Following Estrogen Loss, Microdamage and Disuse

September 20, 05:30 PM-07:00 PM

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#### [FRI-560] Mechanical Loading Reduces the Adverse Effects of Fatty Acid Overload on Osteocytes

September 20, 05:30 PM-07:00 PM

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## [FRI-561] Impaired 1,25 dihydroxyvitamin D action contributes to the abnormalities in lacuno-canalicular remodeling observed in the Hyp mouse model of XLH

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### [FRI-563] Live Cell and Intravital Imaging Reveals Differences in Mitochondrial Redox State, Morphology and Number between Osteoblasts and Osteocytes

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#### [FRI-564] Accelerated aging and bone loss in mice lacking PTH receptor in osteocytes

September 20, 05:30 PM-07:00 PM

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### [FRI-589] MRI-based textural analysis of trabecular bone: a novel method for opportunistic screening of bone quality

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#### [FRI-591] Local bone density defects in patients with femoral neck fracture

September 20, 05:30 PM-07:00 PM

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### [FRI-592] Stratification of fracture risk in type 2 Diabetes: development and validation of clinical algorithms from a task force of relevant medical societies

September 20, 05:30 PM-07:00 PM

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# [FRI-594] External bone size predicts age-changes in femoral neck structure and mass leading to increased fracture risk independent of bone mineral density: Findings from the Study of Women's Health Across the Nation and the Study of Osteoporotic Fractures in Men

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# [FRI-597] Comparison of the predictive ability of quantitative and qualitative scoring methods of osteoporotic vertebral fractures using operational skeletal fragility outcomes

September 20, 05:30 PM-07:00 PM

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## [FRI-598] Prevalence of Spinal Osteoporosis in Women and Men Considering Both Bone Strength and Volumetric BMD — A Comparison of Caucasians (in the United States) and Koreans (in Korea)

September 20, 05:30 PM-07:00 PM

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### [FRI-599] Measured Height Loss Predicts Incident Clinical Fractures Independently from FRAX: A Registry-Based Cohort Study

September 20, 05:30 PM-07:00 PM

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### [FRI-600] Effect of Soft Tissue Corrections on Trabecular Bone Score (TBS) in Women and Men with Type 2

**Diabetes: A Rising Tide Floats All Boats** September 20, 05:30 PM-07:00 PM

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# [FRI-631] Five-fold Increased Atypical Femur Fracture Risk Among North American Asians is Similar Across Asian Ethnic Subgroups and Is Not Explained by Confounding Variables

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# [FRI-632] Risk of osteoporosis with non-vitamin K antagonist oral anticoagulant vs. warfarin among patients with atrial fibrillation: a real-world nationwide propensity score-matched cohort study

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### [FRI-633] Type 2 Diabetes Mellitus and the risk of osteoporotic vertebral fractures: a meta-analysis of summary and individual participant data from 852,705 individuals

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### [FRI-634] Positive effects of low LDL-C and statins on bone mineral density: an integrated epidemiological observation analysis and Mendelian Randomization study

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### [FRI-637] Cardiovascular events in a population-based observational cohort of bisphosphonate users and untreated control subjects linked to BMD and comorbidity information

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#### [FRI-639] The Pattern of Incident Fractures in Patients with Type 2 Diabetes Mellitus

September 20, 05:30 PM-07:00 PM

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### [FRI-640] The Risk of Hip and Non-Vertebral Fractures in Parkinson's Disease: A Systematic Review and Meta-Analysis

September 20, 05:30 PM-07:00 PM

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#### [FRI-641] Differential Risk of Fracture Attributable to Type 2 Diabetes Mellitus According to Skeletal Site

September 20, 05:30 PM-07:00 PM

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### [FRI-642] Associations of Clinically Unrecognized vs Clinically Recognized Vertebral Fracture with Subsequent Mortality

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### [FRI-643] Effect of Time Since Prior Fracture on Mortality at the Time of Clinical Assessment: A Registry-Based Cohort Study

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#### [FRI-644] Real-World Outcomes and Imminent Fractures After Index Fragility Fracture: A Population Study

September 20, 05:30 PM-07:00 PM

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### [FRI-687] REAL-WORLD OUTCOMES AND COST OF MANAGEMENT OF OSTEOPOROTIC FRACTURES IN ONTARIO, CANADA

September 20, 05:30 PM-07:00 PM

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## [FRI-688] True costs of patient management over 18 months following a hip, vertebral, distal radius, or proximal humerus fragility fracture in France – Results from the ICUROS Study

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### [FRI-689] Social Isolation: An Important Predictor of Adverse Events and Patient Reported Outcome Measures (PROMs) in Elderly Hip Fracture Patients

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### [FRI-691] Improving Pain Control Following Fractures in the Emergency Department: the PAINFREE Initiative

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### [FRI-706] The Effect of Exercise or Bisphosphonate Use on Bone Density and Microarchitecture among Postmenopausal Women with Low Bone Mass Experiencing Modest Weight Loss

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### [FRI-707] Evaluating the Relationship Between Physical Activity Level and Bone Structure: a pQCT Analysis September 20, 05:30 PM-07:00 PM

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# [FRI-708] Effectiveness of Resistance and Jump Training or Machine-based Isometric Training for Middle-aged and Older Men with Osteopenia and Osteoporosis: LIFTMOR for Men Trial Preliminary Findings

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### [FRI-709] High impact exercise increased femoral neck bone density with no adverse effects on imaging markers of knee osteoarthritis in postmenopausal women

September 20, 05:30 PM-07:00 PM

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### [FRI-710] A comparison of DXA-derived bone responses to impact versus resistance training in young adult women: The OPTIMA-Ex trial.

September 20, 05:30 PM-07:00 PM

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## [FRI-728] TRAF3 in mesenchymal progenitor cells limits low-level chronic inflammation associated with osteoporosis by inhibiting GSK-3β induced NF-KB activation

September 20, 05:30 PM-07:00 PM

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### [FRI-729] Interactive Effects of Lactation History and Estrogen Status on Cellular Activities of Rat Maternal Bone

September 20, 05:30 PM-07:00 PM

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### [FRI-730] Inverse correlation between trabecular bone volume and bone marrow adipose tissue in rats treated with osteoanabolic agents

September 20, 05:30 PM-07:00 PM

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## [FRI-737] Long term consequences of bariatric surgery: the obesity of bone and a subnormal ratio of bone mass to body weight

September 20, 05:30 PM-07:00 PM

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## [FRI-738] Utility of Trabecular Bone Score (TBS) for Fracture Risk Assessment in Glucocorticoid-Induced Osteoporosis

September 20, 05:30 PM-07:00 PM

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### [FRI-739] Impaired Cortical and Trabecular microstructure of Proximal Femur in HIV-infected Men Compared to Age-matched Uninfected Men measured by 3D Cortical Bone Mapping

September 20, 05:30 PM-07:00 PM

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## [FRI-740] Effects of SGLT2 Inhibitors on Fractures and Bone Mineral Density in Type 2 Diabetes Mellitus: An Updated Meta-analysis

September 20, 05:30 PM-07:00 PM

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#### [FRI-744] Subclinical hyperthyroidism is associated with increased fracture risk: The MrOS Sweden Study

September 20, 05:30 PM-07:00 PM

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### [FRI-765] A sensitive method to monitor the migration of human bone marrow mesenchymal stem cells in mice models.

September 20, 05:30 PM-07:00 PM

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### [FRI-766] Modeling-based Bone Formation Persists in the Femoral Neck Despite Remodeling Inhibition in Subjects Treated with Denosumab

September 20, 05:30 PM-07:00 PM

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### [FRI-767] Effect of Bisphosphonate on Prevention of Bone Loss after Gastrectomy: A Randomized Controlled Trial

September 20, 05:30 PM-07:00 PM

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# [FRI-769] Osteosarcoma Surveillance Program Using Real World Data from US Pharmacy Claims Linked to State Cancer Registry Data to Estimate the Incidence of Osteosarcoma Among Patients Treated with Teriparatide (Forteo)

September 20, 05:30 PM-07:00 PM

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### [FRI-770] A POST HOC ANALYSIS OF ROMOSOZUMAB EFFICACY AND BASELINE FRACTURE RISK – GREATER REDUCTION IN FRACTURE OUTCOMES IN PATIENTS AT HIGHER RISK

September 20, 05:30 PM-07:00 PM

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#### [FRI-771] Denosumab 10 Year Simulation of Bone Remodeling In Human Biopsies

September 20, 05:30 PM-07:00 PM

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### [FRI-774] Is severely suppressed bone turnover in patients on long term bisphosphonate treatment causally related atypical femoral fracture?

September 20, 05:30 PM-07:00 PM

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## [FRI-775] Bone Balance in Postmenopausal Women Treated with Combined High-Dose Teriparatide and Denosumab: The DATA-HD Randomized Controlled Trial

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#### [FRI-776] Risk predictors for seniors at imminent risk of fracture

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### [FRI-777] To determine the therapeutic potential of senolytic bone marrow MSCs for frailty with bone fracture September 20, 05:30 PM-07:00 PM

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### [FRI-778] Study of Twice-Weekly Injections of Teriparatide by Comparing Efficacy with Once-Weekly Injections in Osteoporosis Patients: The TWICE Study

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### [FRI-781] Bisphophonates Prevent Bone Loss Associated with Denosumab Treatment Discontinuation

September 20, 05:30 PM-07:00 PM

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# [FRI-822] Suppression of RANKL expression using a CRISPR interference transgene mimics gene deletion in mice: a loss-of-function approach that may offer improved cell type-specificity compared to the Cre-loxP system

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#### [FRI-824] The Composition Of The Gut Microbiota Is A Non-Genomic Contributor To Bone Mass Heritability

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#### [FRI-833] Insights from Lexicon Pharmaceuticals' Genome5000™ Mouse Gene Knockout Campaign

September 20, 05:30 PM-07:00 PM

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#### [FRI-834] Novel model of restricted mobility induced skeletal detriment in zebrafish (Danio rerio)

September 20, 05:30 PM-07:00 PM

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### [FRI-835] Anti-interleukin-6 therapy (tocilizumab) improves chronic hip synovitis and bone healing in a piglet model of ischemic osteonecrosis of the femoral head

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#### [FRI-836] The SH3BP2-SYK Axis Regulates Alveolar Bone Loss in a Mouse Model for Periodontitis

September 20, 05:30 PM-07:00 PM

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#### [FRI-838] Investigating Global Changes in Gene Expression in a Murine Model of Cherubism

September 20, 05:30 PM-07:00 PM

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#### [FRI-840] CaMKK2-AMPK-p38 MAPK Axis in Osteoarthritis

September 20, 05:30 PM-07:00 PM

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#### [FRI-844] OI fractures show delayed healing and increased possibility of re-fracture in murine models

September 20, 05:30 PM-07:00 PM

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#### [FRI-869] Different effects of Abaloparatide and hPTH(1-34) on Bone Resorption and Bone Formation

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### [FRI-870] Bone vascular remodeling and pericytes mobilization during the transient anabolic response to antisclerostin antibodies treatment and its rescue by iPTH

September 20, 05:30 PM-07:00 PM

West Hall C/Orange County Convention Center

### [FRI-873] A blueberry-enriched diet counteracts the effects of estrogen deficiency in mice on bone, skeletal muscle, and peripheral fat, and alters the gut microbiome.

September 20, 05:30 PM-07:00 PM

West Hall C/Orange County Convention Center

### [FRI-874] Dynamics of Modeling- and Remodeling-Based Bone Formation in Response to Intermittent Parathyroid Hormone (PTH) in Male, Female, and Ovariectomized (OVX) Rats

September 20, 05:30 PM-07:00 PM

West Hall C/Orange County Convention Center

## [FRI-890] Mazabraud syndrome is often associated with complications of FD/MAS; a multicenter international cohort study.

September 20, 05:30 PM-07:00 PM

West Hall C/Orange County Convention Center

### [FRI-891] Teriparatide (TPTD) for Premenopausal Idiopathic Osteoporosis: A Randomized Single Switch-Over Trial

West Hall C/Orange County Convention Center

### [FRI-892] A Phase 1 PK/PD Study of Once vs Twice Daily Administration of rhPTH(1-84) in Patients With Hypoparathyroidism: Interim Analysis

September 20, 05:30 PM-07:00 PM

West Hall C/Orange County Convention Center

### [FRI-893] Physical Function and Health-Related Quality of Life in Adults Treated with Asfotase Alfa for Pediatric-Onset Hypophosphatasia

September 20, 05:30 PM-07:00 PM

West Hall C/Orange County Convention Center

### [FRI-897] Clinical and Biochemical Phenotypes of Adults with Monoallelic and Biallelic ENPP1 Mutations

September 20, 05:30 PM-07:00 PM

West Hall C/Orange County Convention Center

# [FRI-898] Hypophosphatemic Osteosclerosis Associated With Novel Homozygous Mutations Of DMP1 Encoding Dentin Matrix Protein 1 and SPP1 Encoding Osteopontin: The First Digenic SIBLING Protein Osteopathy

September 20, 05:30 PM-07:00 PM

West Hall C/Orange County Convention Center

#### [FRI-916] Multiple Modalities of Signaling by FOP Mutant BMP Receptor in the Developing Zebrafish

September 20, 05:30 PM-07:00 PM

West Hall C/Orange County Convention Center

### [FRI-917] MEKK2 Mediates Pathologic ERK Activation Downstream of NF1 in Osteoblasts In Vitro and In Vivo

September 20, 05:30 PM-07:00 PM

West Hall C/Orange County Convention Center

### [FRI-918] Notch2 Antisense Oligonucleotides Ameliorate the Osteopenia of Hajdu Cheney Syndrome Mutants

September 20, 05:30 PM-07:00 PM

West Hall C/Orange County Convention Center

#### [FRI-919] New mouse model with Ifitm5 S42L connects types V and VI osteogenesis imperfecta

September 20, 05:30 PM-07:00 PM

West Hall C/Orange County Convention Center

#### [FRI-920] Therapeutic Targeting of Autophagy in Osteogenesis Imperfecta

September 20, 05:30 PM-07:00 PM

West Hall C/Orange County Convention Center

#### [FRI-925] SIRT1 Promoter SNP rs932658 Associated with Bisphosphonates-related Osteonecrosis of the Jaw

September 20, 05:30 PM-07:00 PM

West Hall C/Orange County Convention Center

### [FRI-926] Heterozygous SH3BP2 Cherubism Mutation Exacerbates Alveolar Bone Loss in a Mouse Model for Periodontitis

September 20, 05:30 PM-07:00 PM

West Hall C/Orange County Convention Center

### [FRI-950] The Role of Individual Components of Sarcopenia and Their Rate of Decline in Fracture Risk in Elderly Women and Men

September 20, 05:30 PM-07:00 PM

West Hall C/Orange County Convention Center

#### [FRI-951] Higher Circulating Standardized 25(OH)D is Not Associated With Increased Falls Risk

September 20, 05:30 PM-07:00 PM

West Hall C/Orange County Convention Center

## [FRI-954] One Leg Standing Time Predicts Fractures in Older Women Independent of Clinical Risk Factors and Bone Mineral Density

West Hall C/Orange County Convention Center

[FRI-956] TRAF6 mediates impaired muscle regeneration induced by TNFα

September 20, 05:30 PM-07:00 PM

West Hall C/Orange County Convention Center

# ASBMR Connect: Early Career Investigator Networking Happy Hour

September 20, 2019, 07:15 PM

Room TBD/Orange County Convention Center

ASBMR Connect is supported in part by educational grants from Amgen, Inc. and Ultragenyx Pharmaceutical Inc.

Early Stage Investigators who wish to continue building connections with peers in a fun and informal setting are invited to attend this event. Participants are encouraged to participate in Networking Bingo and will get a chance to win drink tickets and be entered in a raffle drawing for a free ASBMR In-Training Membership.

### **Muscle and Bone Working Group**

September 20, 2019, 07:15 PM W304 AB/Orange County Convention Center

### **Rare Bone Working Group**

September 20, 2019, 07:15 PM W304 EFG/Orange County Convention Center

Rare Bone Disease Working Group

Friday, September 20, 2019

7:15 PM - 9:30 PM

Registration Fee: \$50

#### Chairperson - Laura Tosi, MD, Children's National Health System

Supported by The Rare Bone Disease Alliance and

unrestricted educational grants from

Alexion Pharmaceuticals, Clementia, an IPSEN Company,

Regeneron Pharmaceuticals and Ultragenyx Pharmaceutical, Inc.

7:15 - 7:35 PM Dinner and Welcome – Laura Tosi, MD, Children's National Health System

7:35 - 8:05 PM Keynote Address

From Phenotype to Genotype: The Changing Taxonomy of Rare Bone Disease

Leslie Biesecker, MD, PhD, National Institutes of Health

8:05 - 8:40 PM Management Pearls to Enhance the Care of Patients with Rare Bone Diseases

Fibrous Dysplasia

Alison Boyce, MD, National Institutes of Health

Pulmonary and Cardiac Issues in Osteogenesis Imperfecta

Catherine Raggio, MD, Hospital for Special Surgery

Hypophosphatasia

Michael Whyte, MD, Shriners Hospital for Children, St. Louis, MO

8:40-8:50PM New Disease Models

Vanishing Act: Animal Models of Disappearing Bone Disease

Michael Dellinger, PhD, UT Southwestern

8:50 - 9:30 PM Rare Bone Disease Clinical Trial Updates

Iron Therapy for Autosomal Dominant Hypophosphatemic Rickets (ADHR)

Erik Imel, MD, Indiana University

Fibrodysplasia Ossificans Progressiva and Multiple Hereditary Exostoses

Maurizio Pacifici, PhD, Children's Hospital of Philadelphia

Fibrodysplasia Ossificans Progressiva

Eduardo Forleo Neto, MD, MSc, Regeneron Pharmaceuticals

Fibrodysplasia Ossificans Progressiva

Tim LaBranche, DVM, PhD, BlueprintMedicines

9:30 - 9:45 PM Questions and Final Discussion

#### **Disclosures**

Leslie Biesecker, MD,PhD,NIH,3, ArQule, Inc. 2, Illumina, 6, Genentech, 7, Cold Spring Harbor Laboratory, 3; Alison Boyce, MD, Amgen, 2, Ultragenyx, 2; Michael Dellinger, PhD, No Disclosures; Erik Imel, MD, Ultragenyx 2,5, Pharmacosmos, 5; Timothy Paul LaBranche, DVM, PhD, Blueprint Medicines, 1,3; Eduardo Forleo Neto, MD,MSc,Regeneron 1,3; Maurizio Pacifici PhD Clementia, 1; Cathleen Raggio, MD, OlFoundation 2, 6, Biomarin 5,8, Alexion, 8;Laura Tosi, MD, Ultragenyx 2,Ol Foundation,2; Michael Whyte,MD, Diichi Sankyo,Inc, 5, Ultragenyx, 2.

### **Bone Turnover Markers Working Group**

September 20, 2019, 07:30 PM W307 B/Orange County Convention Center

# Women in Bone and Mineral Research Evening Networking Reception

September 20, 2019, 08:00 PM Room TBD/Orange County Convention Center This program is supported in part by Ultragenyx Pharmaceutical Inc.

The Women in Bone and Mineral Research Committee invites all colleagues to attend its Networking & Dessert

Reception at the ASBMR 2019 Annual Meeting. Moderated by the ASBMR Women's Committee Chair, Michaela Reagan, Ph.D., panelists including Kate Ward, Ph.D., Christopher Hernandez, Ph.D., John Eisman, FRACP, MBBS, Ph.D., and Melissa Kacena, Ph.D., will discuss this year's topic: "Bridging the Gender Gap: Continuing the Conversation." With time for networking before and after, the panelists' discussion will focus on what individual labs are doing to help make the work environment more open and equal for women in science. This event is free to all registered Annual Meeting attendees.

# ASBMR Connect: Early Career Investigator after Hours Happy Hour

September 20, 2019, 08:30 PM
Room TBD/Orange County Convention Center
ASBMR Connect is supported in part by educational grants from Amgen, Inc. and Ultragenyx Pharmaceutical Inc.

Early Stage Investigators are invited to continue networking at an off-site location in Orlando. Join your peers to build a network of career-long contacts in a relaxed and fun environment.

# Industry Supported Symposium: Addressing Bone Manifestations in Gaucher Disease

September 21, 2019, 06:00 AM W308/Orange County Convention Center Supported by an educational grant from SANOFI-GENZYME Pharmaceuticals

#### **Program**

6:00 am

Registration and Breakfast Buffet

6:25 am

Introductions, Disclosures

6:30 am

Overview of Gaucher Disease (GD)

Skeletal Involvement of GD including sample cases

**Bone Symptoms** 

**Available Treatment Options** 

7:20 am

Closing Comments / Q&A

7:30 am

Adjourn

#### **Faculty**

Paige Kaplan, MBBCh

**Professor Emerita** 

Perelman School of Medicine at the University of Pennsylvania

Children's Hospital of Philadelphia

Philadelphia, PA

#### **ACCREDITATION AND DESIGNATION STATEMENT**

EXCEL Continuing Education is accredited by the Accreditation Council for Continuing Medical Education to provide continuing medical education for physicians.

EXCEL Continuing Education designates this live activity for a maximum of 1 *AMA PRA Category 1 Credits*™. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

#### **ASBMR Disclaimer**

This Industry-Supported Symposium will be held in conjunction with the ASBMR 2019 Annual Meeting and is not a part f the official program of the American Society for Bone and Mineral Research. EXCEL Continuing Education is responsible for the organization and scientific content of this event in accordance with the Essential Areas and Policies of the ACCME as well as with FDA guidelines.

#### **Faculty Disclosure Statement**

EXCEL Continuing Education has a conflict of interest policy that requires course faculty to disclose any real or apparent commercial financial interests related to the content of their presentation/materials. It is not assumed that these financial interests or affiliations will have an adverse impact on faculty presentations; they are simply noted here to fully inform participants.

Dr. Kaplan has indicated that she has received honoraria as an advisor, ICGC Registry Board member, and lecturer from Sanofi Genzyme, honoraria as chairperson, DSMB, and TALIAS registry from Pfizer, and honoraria as chairperson for DSMB from Aeglea.

EXCEL staff and peer reviewer have no relevant information to disclose.

### **Registration Open**

September 21, 2019, 07:00 AM Valencia Ballroom Lobby/Orange County Convention Center

### Louis V. Avioli Lecture and Presentation of Esteemed Awards

September 21, 2019, 08:00 AM

Valencia Ballroom B-D/Orange County Convention Center

Join your colleagues to celebrate the following ASBMR 2019 Esteemed Award Winners: Louis V. Avioli Founders Award, Frederic C. Bartter Award, Fuller Albright Award, Gideon A. Rodan Award and Lawrence G. Raisz Award Anabolic Actions of Parathyroid Hormones: Genes, Cells, and Models

 Laurie McCauley DDS, PhD, University of Michigan School of Dentistry, United States September 21, 08:30 AM-09:30 AM

Valencia Ballroom B-D/Orange County Convention Center

### **Discovery Hall Open**

September 21, 2019, 09:30 AM West Hall C/Orange County Convention Center

### **Networking Break**

September 21, 2019, 09:30 AM Valencia Foyer/Orange County Convention Center

### **Posters Open**

September 21, 2019, 09:30 AM

West Hall C/Orange County Convention Center

All posters will be displayed in the ASBMR Discovery Hall from Saturday, September 21 through Monday, September 23. For a full listing of e-poster, poster and late-breaking poster presentations, please refer to the poster section of the onsite program book.

### Plenary Orals: Cell Regulators of Bone Disease

September 21, 2019, 09:45 AM

Valencia Ballroom A/Orange County Convention Center

- Clemens Bergwitz MD, Yale School of Medicine, United States, Moderator
- Marie-Helene Lafage-Proust MD, PhD, INSERM U1059- Universite de Lyon-CHU-saint-etienne, France, Moderator
   [1041] Lipocalin-2 Regulates FGF23 Production in Chronic Kidney Disease

September 21, 09:45 AM-10:00 AM

Valencia Ballroom A/Orange County Convention Center

#### [1042] Stimulation of Piezo1 by Mechanical Loading Promotes Bone Anabolism

September 21, 10:00 AM-10:15 AM

Valencia Ballroom A/Orange County Convention Center

#### [1043] Lipocalin 2: a possible target in DMD-induced bone loss.

September 21, 10:15 AM-10:30 AM

Valencia Ballroom A/Orange County Convention Center

#### [1044] EPO and HIF-PHDi in treating CKD-related anemia and control of circulating FGF23

September 21, 10:30 AM-10:45 AM

Valencia Ballroom A/Orange County Convention Center

### [1045] DAB, An FDA-approved Drug, Protects against Osteoarthritis through BIG2 Mediated Regulation of TNF $\alpha$ and IL-1 $\beta$ Signaling

September 21, 10:45 AM-11:00 AM

Valencia Ballroom A/Orange County Convention Center

# Plenary Orals: John H. Carstens Memorial Session: Osteoporosis Treatment

September 21, 2019, 09:45 AM

Valencia Ballroom B-D/Orange County Convention Center

- Felicia Cosman MD, Columbia University College of Physicians and Surgeons, United States, Moderator
- Roland Chapurlat MD, PhD, E. Herriot Hospital, France, Moderator

### [1046] VITamin D and OmegA-3 TriaL (VITAL): Effects of Vitamin D on Bone Density, Turnover and Structure

September 21, 09:45 AM-10:00 AM

Valencia Ballroom B-D/Orange County Convention Center

## [1047] Subject Characteristics and Changes in Bone Mineral Density After Transitioning From Denosumab to Alendronate in the Denosumab Adherence Preference Satisfaction (DAPS) Study

September 21, 10:00 AM-10:15 AM

Valencia Ballroom B-D/Orange County Convention Center

#### [1048] Zoledronic Acid Maintains Bone Mineral Density after Denosumab Administration (DATA-HD Extension)

September 21, 10:15 AM-10:30 AM

Valencia Ballroom B-D/Orange County Convention Center

## [1049] Extensive Modeling-Based Bone Formation After 2 Months of Romosozumab Treatment: Results From the FRAME Clinical Trial

September 21, 10:30 AM-10:45 AM

Valencia Ballroom B-D/Orange County Convention Center

# [1050] Romosozumab Improves Lumbar Spine Bone Mineral Density and Bone Strength Greater Than Alendronate as Assessed by Quantitative Computed Tomography and Finite Element Analysis in the ARCH Trial

September 21, 10:45 AM-11:00 AM

Valencia Ballroom B-D/Orange County Convention Center

### **Challenge the Experts: Osteoporosis**

September 21, 2019, 11:00 AM

W414/Orange County Convention Center

• Peter Ebeling AO FRACP, MBBS, MD, School of Clinical Sciences, Monash University, Australia, Chair

#### Panelist #2

Nelson Watts MD, Mercy Health Osteoporosis and Bone Health Services, United States

September 21, 11:00 AM-12:00 PM

#### Panelist #3

 Felicia Cosman MD, Columbia University College of Physicians and Surgeons, United States September 21, 11:00 AM-12:00 PM

#### Panelist #1

 Michael R McClung MD, Oregon Osteoporosis Center, United States September 21, 11:00 AM-12:00 PM

### **Cutting Edge Concepts: CRISPR Beyond the Mouse**

September 21, 2019, 11:00 AM

W315/Orange County Convention Center

- · Bart Williams PhD, Van Andel Research Institute, United States, Chair
- · Ernestina Schipani MD, PhD, University of Michigan, United States, Chair

#### Opportunities and Challenges of Gene Editing (CRISPR/TALEN) in Production Animals

· Charles Long PhD, Texas Veterinary Medical Center

September 21, 11:00 AM-11:30 AM

W315/Orange County Convention Center

### Beyond the Mouse: Practicalities of Using CRISPR to Generate Bone Disease in Osteonal Bone Remodeling Models

Larry Suva PhD, Texas Veterinary Medical Center, United States

September 21, 11:30 AM-12:00 PM

W315/Orange County Convention Center

# Hands-on Workshop: Histomorphometry: An Interactive Introduction

September 21, 2019, 11:00 AM

W304 AB/Orange County Convention Center

Hands-on Workshops are ticketed events and require advance registration. Registration is not available onsite.

# Meet the Award Winner: How I Started Looking at the Microbiome and Bone

September 21, 2019, 11:00 AM

W311 B/Orange County Convention Center

#### Meet-the-Award Winner: How I Started Looking at the Microbiome and Bone

· Christopher Hernandez PhD, Cornell University, United States

September 21, 11:00 AM-12:00 PM

W311 B/Orange County Convention Center

### Meet the Professor: Bisphosphonate Drug Holidays

September 21, 2019, 11:00 AM

W312 AB/Orange County Convention Center

#### **Bisphosphonate Drug Holidays**

Dolores Shoback MD, VA Medical Center, United States

September 21, 11:00 AM-12:00 PM

W312 AB/Orange County Convention Center

### Meet the Professor: Gut Microbiome in Bone Density

September 21, 2019, 11:00 AM W311 C/Orange County Convention Center

#### **Gut Microbiome in Bone Density**

 Claes Ohlsson, Center for Bone and Arthritis Research at the Sahlgrenska Academy, Sweden September 21, 11:00 AM-12:00 PM

W311 C/Orange County Convention Center

# Meet the Professor: iPS Cells and Organoids as Human Experimental Disease Models

September 21, 2019, 11:00 AM W311 H/Orange County Convention Center

### iPS Cells and Organoids as Human Experimental Disease Models

 Edward Hsiao MD, PhD, University of California, San Francisco, United States September 21, 11:00 AM-12:00 PM

W311 H/Orange County Convention Center

# Meet the Professor: Maintaining Skeletal Health During the Mission to Mars

September 21, 2019, 11:00 AM W311 D/Orange County Convention Center

### Maintaining Skeletal Health During the Mission to Mars

JEAN SIBONGA PhD, NASA JOHNSON SPACE CENTER, United States

September 21, 11:00 AM-12:00 PM

W311 D/Orange County Convention Center

# Meet the Professor: Matrix Vesicles-mediated Initiation of Skeletal and Dental Mineralization: Molecules and Pathways

September 21, 2019, 11:00 AM

W311 E/Orange County Convention Center

### Matrix Vesicles-mediated Initiation of Skeletal and Dental Mineralization: Molecules and Pathways

• Jose Luis Millan PhD, Sanford Burnham Prebys Medical Discovery Institute, United States September 21, 11:00 AM-12:00 PM

W311 E/Orange County Convention Center

# Meet the Professor: Therapeutic Options for XLH with Availability of Burosumab

September 21, 2019, 11:00 AM

W311 G/Orange County Convention Center

#### Therapeutic Options for XLH with Availability of Burosumab

• Thomas Carpenter MD, Yale University School of Medicine, United States

September 21, 11:00 AM-12:00 PM

W311 G/Orange County Convention Center

# Meet the Professor: Treatment to Prevent Fracture in Postmenopausal Women with Osteopenia

September 21, 2019, 11:00 AM

W312 C/Orange County Convention Center

### Treatment to Prevent Fracture in Postmenopausal Women with Osteopenia

· Richard Eastell MD, University of Sheffield, United Kingdom

September 21, 11:00 AM-12:00 PM

W312 C/Orange County Convention Center

### Meet the Professor: Vitamin D and Immunity

September 21, 2019, 11:00 AM

W311 A/Orange County Convention Center

#### Vitamin D and Immunity

• John Adams MD, University of California, Los Angeles, United States

September 21, 11:00 AM-12:00 PM

W311 A/Orange County Convention Center

### **Networking Break**

September 21, 2019, 12:00 PM

West Hall C/Orange County Convention Center

### **Late-Breaking Posters I**

September 21, 2019, 12:30 PM

West Hall C/Orange County Convention Center

All posters will be displayed in the ASBMR Discovery Hall from Saturday, September 21 through Monday, September 23. For a full listing of oral poster, poster and late-breaking poster presentations, please refer to the poster section of the onsite program book.

#### [LB SAT-971] Bone Health in Chronic Kidney Disease (CKD) is regulated by Inflammation

September 21, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

### [LB SAT-974] Deep Learning-Based Segmentation of Vertebral Image Data Outperforms Other Automated Methods

September 21, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

#### [LB SAT-975] BONE MATERIAL PROPERTIES IN PREMENOPAUSAL TYPE 2 DIABETES MELITUS PATIENTS

September 21, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

### [LB SAT-976] The Degradation and Osteogensis of SrHPO4-coated Mg–Nd–Zn–Zr Alloy Intra-medullary Nail in Femoral Shaft Fractured Rat Model mediated by Tlr4/ Pl3K/Akt Signaling Pathway

September 21, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

### [LB SAT-981] Do specific fat depots influence the potential for optimal bone development in growing children?

September 21, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

### [LB SAT-986] Oral Antibiotic Therapy Critically Regulates Osteoimmune Response Effects and Skeletal Homeostasis in the Alveolar Bone Complex

September 21, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

### [LB SAT-991] Retinoid X receptor $\alpha$ (RxR) phosphorylation at serine 265 regulates fat disturibation and bone strength in mouse

September 21, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

# [LB SAT-993] The therapeutic targeting of human receptor activator of nuclear factor kappa-B ligand (RANKL) directly impairs colonization of the bone marrow by RANK-expressing human breast cancer cells in vivo.

September 21, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

### [LB SAT-995] Degrading products of chondroitin sulfate can induce hypertrophy-like changes and MMP-13/ADAMTS5 production in chondrocytes

September 21, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

## [LB SAT-996] Automated Indentation of Femoral and Temporomandibular Joints for Characterization of Cartilage Tissue Quality in Fgf2 KO Mice

September 21, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

#### [LB SAT-1000] Relapsing Tumor induced Osteomalacia

September 21, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

## [LB SAT-1002] Loss of Function in Lysosomal Acid Lipase (LAL) Impairs Osteoblastogenesis and Increases Fracture Risk

September 21, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

### [LB SAT-1007] Intracellular Ca2+ signaling encodes mechanotransduction in periodontal ligament fibroblast September 21, 12:30 PM-02:30 PM

Coptombol 21, 12:001 W 02:001 W

### West Hall C/Orange County Convention Center

# [LB SAT-1008] 3D Shape Modelling Analysis of the Hip using 3D-SHAPER Software – A Comparison Between Contralateral, Ipsilateral, and Baseline Hips for RTKR, TKR, and Control Participants

September 21, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

# [LB SAT-1011] Transcriptional profiling reveals a different signature in metastatic and non-metastatic parathyroid carcinomas

September 21, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

# [LB SAT-1013] Depression of Vitamin D Levels after Adult Primary Posterior Spinal Fusion. Are We Adding Insult to Injury?

September 21, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

### [LB SAT-1016] Role of the Wnt gatekeeper Sfrp4 in the maintenance of the pool of periosteal stem cells/progenitors

September 21, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

#### [LB SAT-1017] A Novel Chondro-Osseous Progenitor Induced During Heterotopic Bone Formation

September 21, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

## [LB SAT-1023] Novel synthetic peptide derived from silk fibroin enhances cellular adhesion and tissue regeneration via the glycosaminoglycan binding of extracellular matrix

September 21, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

#### [LB SAT-1024] Role of Mitophagy during osteoblast differentiation

September 21, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

#### [LB SAT-1027] Distinct Role of Endogenous and Exogenous Leukotrienes on Osteoclastogenesis

September 21, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

#### [LB SAT-1028] ASXL2-Bap1 epigenetic complex regulates bone homeostasis

September 21, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

### [LB SAT-1033] Connexin43 hemichannels mediate intracellular Ca2+-regulated mechanotransduction in osteocytes

September 21, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

### [LB SAT-1034] CRISPR/CAS9 mediated SOST knockout ameliorates glucocorticoid-associated osteonecrosis of femoral head in rats

September 21, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

#### [LB SAT-1035] TNFα, IL6: Potential drug targets for glucocorticoid-induced bone loss

September 21, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

## [LB SAT-1041] DXA-based 3D mapping of hip cortical thinning correlates with incident fractures in postmenopausal women from the GERICO cohort

September 21, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

### [LB SAT-1042] A Deep Learning Artificial Intelligence (AI) Method to Improve Spine Segmentation in AP spine DXA Scans and subsequently its BMD and TBS Accuracy

September 21, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

### [LB SAT-1043] Effects of Denosumab on Trabecular Bone Score (TBS) compared with Bone Mineral Density (DXA)

September 21, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

### [LB SAT-1050] The mortality rate of hip fracture within 1 year after in Korea: A nationwide population-based cohort study

September 21, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

## [LB SAT-1051] Men 80-89 Years with Osteopenic BMD have Substantial 5-year Risk of Hip Fracture Accounting for Competing Mortality and Chronic Conditions

September 21, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

## [LB SAT-1052] The imminent subsequent fracture risk in patients with a recent fracture at the FLS is mainly associated with falls – a 3 year prospective cohort study.

September 21, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

### [LB SAT-1062] Salivary IL-1ß but not dietary flavonoids are associated with healing after periodontal therapy to prevent tooth loss

September 21, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

#### [LB SAT-1063] Dual effects of marine natural extracts that affect the treatment of osteoporosis and diabetes

September 21, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

### [LB SAT-1068] Fracture risk following bariatric surgery: a systematic review and meta-analysis of observational studies

September 21, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

### [LB SAT-1069] Oral vs Intravenous Bisphosphonates for Preventing Bone Loss After Denosumab Discontinuation

September 21, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

### [LB SAT-1070] Early recurrence of increased bone turnover markers after initial response to single dose zoledronate following denosumab discontinuation in postmenopausal women

September 21, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

### [LB SAT-1074] Optimization of sclerostin and Dkk1 neutralizing antibody ratio to maximize anabolic action in the skeleton

September 21, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

#### [LB SAT-1077] L-Glutamine Effect on Cortical and Trabecular Bone in Sickle Mice

September 21, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

#### [LB SAT-1080] PDE5A Inhibition Prevents Bone Resorption

September 21, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

#### [LB SAT-1084] Visualization of Asfotase Alfa-Binding to Sites of Calcification In Vivo

September 21, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

#### [LB SAT-1085] Sensory neuron dysfunction underlies ACVR1-mediated pain in human heterotopic ossification

September 21, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

### **Poster Session I**

September 21, 2019, 12:30 PM

West Hall C/Orange County Convention Center

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# [SAT-1] Changes in Cortical Porosity and Bone Strength Through Four Years of rhPTH(1-84) Therapy in Hypoparathyroidism

September 21, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

#### [SAT-2] In vivo detection of vasculature and fat within cortical bone pores: a validation study

September 21, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

### [SAT-3] An Overview of the Etiology, Clinical Manifestations, Management Strategies, and Complications of Hypoparathyroidism from the Canadian National Hypoparathyroidism Registry

September 21, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

#### [SAT-4] Risk Factors for Vertebral Fracture in Primary Hyperparathyroidism

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### [SAT-5] Clinical, Biochemical and Radiological Profile of Normocalcaemic Hyperparathyroidism: a Multicentric Cross-Sectional Evaluation

September 21, 12:30 PM-02:30 PM

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#### [SAT-6] The association between free and total 25(OH)D levels in 28 weeks pregnant women.

September 21, 12:30 PM-02:30 PM

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### [SAT-7] Is urinary calcium the only predictor of nephrolithiasis in patients with asymptomatic primary hyperparathyroidism?

September 21, 12:30 PM-02:30 PM

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### [SAT-8] Hypophosphatemic osteomalacia induced by long-term low-dose adefovir dipivoxil: Clinical characteristics of 140 cases

September 21, 12:30 PM-02:30 PM

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### [SAT-23] A Randomized Single Switch-Over Trial of Teriparatide for Premenopausal Idiopathic Osteoporosis:

#### High Resolution Peripheral Computed Tomography (HR-pQCT) Changes at 24M

September 21, 12:30 PM-02:30 PM

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#### [SAT-24] Removal of Advanced Glycation End-products In Vivo Rescues Bone Fragility

September 21, 12:30 PM-02:30 PM

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#### [SAT-25] Bone microarchitecture and strength in women living with HIV: A cross-sectional HR-pQCT study

September 21, 12:30 PM-02:30 PM

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### [SAT-26] Pretreatment with Anti-Sclerostin Antibody has Lasting Osteogenic Effects on the Femur of Unloaded Male Rats

September 21, 12:30 PM-02:30 PM

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#### [SAT-27] The Effect of Antiresorptive Drugs on Spinal Instrumentation in Patients with Osteoporosis

September 21, 12:30 PM-02:30 PM

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#### [SAT-28] Bone Quality and Turnover in HIV Patients with low BMD and Fractures

September 21, 12:30 PM-02:30 PM

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#### [SAT-29] Mineral deposition is required to repair diffuse damage in bone in vivo

September 21, 12:30 PM-02:30 PM

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#### [SAT-30] Material Properties of Cortical Bone Do Not Differ between Donors with and without Type 2 Diabetes

September 21, 12:30 PM-02:30 PM

#### [SAT-31] Low intensity vibration enhances the effects of zoledronic acid on bone mass and strength

September 21, 12:30 PM-02:30 PM

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#### [SAT-32] Zoledronate and Raloxifene Combination Therapy Enhances Material Properties of Mouse Bone

September 21, 12:30 PM-02:30 PM

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#### [SAT-33] Transcriptional variation in FGFR4 associated with changes in trabecular architecture.

September 21, 12:30 PM-02:30 PM

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#### [SAT-34] Comparison of trabecular bone from human cervical, thoracic and limbar spine using Micro - CT

September 21, 12:30 PM-02:30 PM

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#### [SAT-35] Quantitation of Citrate in Mineral and Organic Compartments of Bone

September 21, 12:30 PM-02:30 PM

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### [SAT-36] MB-SWIFT MRI can Quantify Bone Mineral Density while Concurrently Characterizing Material-level and Biochemical Changes in Bone In Vivo

September 21, 12:30 PM-02:30 PM

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#### [SAT-37] Non-obese Type 2 Diabetic Murine Model Exhibits Altered Matrix Quality and Material Properties

September 21, 12:30 PM-02:30 PM

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### [SAT-38] Collagen Fibril Plasticity is altered in Individuals with Type 2 Diabetes Mellitus and non-osteoporotic Bone Mineral Density

September 21, 12:30 PM-02:30 PM

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### [SAT-39] Alendronate and parathyroid hormone are effective therapies at decreasing bone loss and at enhancing fracture healing in paraplegic rats

September 21, 12:30 PM-02:30 PM

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### [SAT-73] Maternal pregnancy vitamin D supplementation is associated with greater offspring bone mineral density at 4 years: findings from the MAVIDOS trial

September 21, 12:30 PM-02:30 PM

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#### [SAT-74] High Incidence of electrolyte abnormalities despite low first dose of Zoledronic acid

September 21, 12:30 PM-02:30 PM

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#### [SAT-75] Molecular Mechanisms for Pamidronate Rescue of Post-burn Muscle Loss in Children

September 21, 12:30 PM-02:30 PM

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### [SAT-76] Vitamin D level of toddlers with "physiologic" genu varum is lower than that of control toddlers: 1:2 case-control study

September 21, 12:30 PM-02:30 PM

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### [SAT-84] Silicon Oxynitride Coatings Enhance Bone Healing by Inducing Antioxidant Biomarkers in Mandibular Implants

September 21, 12:30 PM-02:30 PM

#### [SAT-85] Mast Cell Deficiency Partially Mitigates Acute Bone Resorption Following Muscle Paralysis

September 21, 12:30 PM-02:30 PM

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### [SAT-86] WNT3a levels decline during aging and further decline in osteoporotic women-Implications for Bone-Muscle Crosstalk

September 21, 12:30 PM-02:30 PM

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#### [SAT-87] Low Protein Diet Induces Bone Loss and Renal Complications in Male Mice

September 21, 12:30 PM-02:30 PM

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### [SAT-88] RIPK1 Inhibition Improves Experimental Autoimmune Arthritis Via Suppression Of

#### Osteoclastogenesis

September 21, 12:30 PM-02:30 PM

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#### [SAT-89] Regulation of megakaryocytes on bone metabolism in a paracrine manner

September 21, 12:30 PM-02:30 PM

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#### [SAT-90] Biglycan Regulates Inflammation and Bone Formation During Fracture Healing

September 21, 12:30 PM-02:30 PM

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#### [SAT-91] Osteocalcin ameliorates the cognitive dysfunctions in APP/PS1 mice

September 21, 12:30 PM-02:30 PM

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## [SAT-92] The Muscle Metabolite, β-aminoisobutyric acid, L-BAIBA, Enhances the Effects of Suboptimal Mechanical Loading on New Bone Formation.

September 21, 12:30 PM-02:30 PM

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#### [SAT-93] Distinctive role of muscle-specific ubiquitin ligases in bone microarchitecture

September 21, 12:30 PM-02:30 PM

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#### [SAT-95] Fibroblast growth factor 23 induces ventricular arrhythmias and prolongs QTc interval in mice

September 21, 12:30 PM-02:30 PM

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### [SAT-96] Impaired PTH-stimulated periosteal proliferation, Wnt activity and fracture healing in Fgf2 knockout mice

September 21, 12:30 PM-02:30 PM

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#### [SAT-97] Tissue clearing of both hard and soft tissue organs with the PEGASOS method

September 21, 12:30 PM-02:30 PM

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### [SAT-124] Sclerostin antibody normalizes decreased trabecular bone and increased bone marrow adipose tissue caused by whole-body irradiation in mice

September 21, 12:30 PM-02:30 PM

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### [SAT-125] Anemia in elderly men predicts hip fracture and nonvertebral osteoporotic fractures; The MrOS Sweden Study

September 21, 12:30 PM-02:30 PM

#### [SAT-126] Metabolic crosstalk in the bone marrow niche drives leukemia chemoresistance

September 21, 12:30 PM-02:30 PM

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#### [SAT-127] Curved microstructures enhance osteogenesis of mesenchymal stem cells

September 21, 12:30 PM-02:30 PM

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#### [SAT-135] PREX1 drives spontaneous bone metastasis of ER+ breast cancer cells

September 21, 12:30 PM-02:30 PM

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#### [SAT-136] TBK1/IKKE inhibitor Amlexanox blocks Multiple Myeloma cell growth in vitro and in vivo

September 21, 12:30 PM-02:30 PM

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#### [SAT-137] HER2 positive breast cancer bone metastasis model for studying efficacy of novel therapies

September 21, 12:30 PM-02:30 PM

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#### [SAT-138] Circulating osteocalcin-positive cells predict the progression of breast cancer bone metastasis

September 21, 12:30 PM-02:30 PM

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#### [SAT-139] PARP1 interacts with ezrin contributing to metastasis in osteosarcoma

September 21, 12:30 PM-02:30 PM

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### [SAT-140] Efferocytosis of Apoptotic Prostate Cancer Cells Induces the Immune Checkpoint Receptor TIM-3 in Bone Metastatic Macrophages

September 21, 12:30 PM-02:30 PM

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#### [SAT-141] The Role of Integrin α2β1 in Breast Cancer Metastasis to Bone

September 21, 12:30 PM-02:30 PM

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### [SAT-142] Activation of Osteoblast Parathyroid Hormone 1 Receptor (PTH1R) Mobilizes Monocytic Myeloid-Derived Suppressor Cells (MDSC) from the Bone Marrow Tumor Hosts

September 21, 12:30 PM-02:30 PM

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#### [SAT-143] The role of the SCF/c-kit pathway in cancer-induced bone pain

September 21, 12:30 PM-02:30 PM

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#### [SAT-144] Breast Cancer Paracrine Signaling interferes with Osteocyte Mechanosensitivity in 3D

September 21, 12:30 PM-02:30 PM

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#### [SAT-145] Parathyroid Hormone Receptor Signaling Mediates Breast Cancer Metastasis to Bone in Mice

September 21, 12:30 PM-02:30 PM

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#### [SAT-146] A progressive auto-amplification loop in TAK1 expression and activation in myeloma cells

September 21, 12:30 PM-02:30 PM

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#### [SAT-147] HIF Signaling Drives Spontaneous Dissemination of Breast Cancer Cells to Bone

September 21, 12:30 PM-02:30 PM

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#### [SAT-174] DDRGK1 is required for the proper chondrogenesis and the regulation of osteochondroprogenitors

September 21, 12:30 PM-02:30 PM

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## [SAT-175] Pinch regulates chondrogenesis by control of TGF-β1 signaling and expression of Sox9 and Runx2 in chondrocytes

September 21, 12:30 PM-02:30 PM

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### [SAT-176] Disruption of aldehyde dehydrogenase 2 gene accelerates articular cartilage degeneration in osteoarthritis induced by mechanical loading in mice

September 21, 12:30 PM-02:30 PM

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### [SAT-177] Healing promotion effects of basic fibroblast growth factor (bFGF) in cartilage repair by synovial $\,\mathrm{m}$ esenchymal stem cell (MSC)

September 21, 12:30 PM-02:30 PM

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#### [SAT-178] Growth plate borderline chondrocytes behave as transient mesenchymal precursor cells

September 21, 12:30 PM-02:30 PM

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## [SAT-179] Changes in 3D Genome Architecture During Chondrocyte Differentiation in the Pathogenesis of Human Chondrodysplasias

September 21, 12:30 PM-02:30 PM

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### [SAT-180] TGF-β/Alk5 signaling regulates the senescence of articular cartilage superficial cells and preventing osteoarthritis initiation

September 21, 12:30 PM-02:30 PM

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## [SAT-181] Runx1 Mediates Articular Cartilage Repair in Osteoarthritis through Upregulating Yap and Downregulating Wnt/β-catenin Signaling Pathway

September 21, 12:30 PM-02:30 PM

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### [SAT-182] Expression profiling and functional analysis of candidate Col10a1 regulators identified by the transcription factor affinity prediction (TRAP) program

September 21, 12:30 PM-02:30 PM

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#### [SAT-199] Hypophosphatasia treatment with recombinant human TNSALP in an 18 year old patient

September 21, 12:30 PM-02:30 PM

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#### [SAT-200] Recovery of adefovir-induced osteomalacia in chronic hepatitis B patient

September 21, 12:30 PM-02:30 PM

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#### [SAT-201] Bilateral Atypical Femoral Fractures Due To A Long-Term Bisphosphonate Based Therapy

September 21, 12:30 PM-02:30 PM

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#### [SAT-202] A case of adult hypophosphatasia with prominent periarticular calcification

September 21, 12:30 PM-02:30 PM

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### [SAT-203] Legg-Calve-Perthes Disease in an 8-year old girl with Acrodysostosis 1 Treated with Growth Hormone.

September 21, 12:30 PM-02:30 PM

## [SAT-204] First Report of Burosumab (Anti-FGF23 Monoclonal Antibody) for Rickets Complicating HRAS-Associated Cutaneous Skeletal Hypophosphatemia Syndrome

September 21, 12:30 PM-02:30 PM

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## [SAT-205] Bisphosphonate-Associated Osteonecrosis Of Jaw (BONJ) Healed With Teriparatide In A Female With Skeletal Metastasis From Breast Cancer (Treated With Radiation Therapy And Zolendronic Acid)

September 21, 12:30 PM-02:30 PM

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#### [SAT-206] Dried Plum Consumption Improves Bone Mineral Density in Osteopenic Postmenopausal Woman

September 21, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

#### [SAT-208] A Unique Cause of Hypercalcemia

September 21, 12:30 PM-02:30 PM

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### [SAT-219] Housing temperature influences bone and brown adipose tissue side effects of atypical antipsychotic drugs in female mice

September 21, 12:30 PM-02:30 PM

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#### [SAT-220] Connexin43 Favors Body Adiposity and Glucose Tolerance in Mice

September 21, 12:30 PM-02:30 PM

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### [SAT-221] Bone Turnover Is Not Acutely Affected by Circulating Insulin Levels In Adults with Type 1 Diabetes:

#### Findings from Hyperinsulinemic Euglycemic Clamps

September 21, 12:30 PM-02:30 PM

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## [SAT-222] Inhibition of the Mitochondrial Permeability Transition via Cyclophilin D Knock-Out Stimulates Osteoprogenitors and Accelerates Bone Fracture Repair

September 21, 12:30 PM-02:30 PM

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# [SAT-223] Dysregulated Adiponectin Signalling via AdipoR1 Deletion Leads to Bone Loss and Increased Marrow Adiposity In Vivo Through Distinct Local and Systemic Mechanisms and in Contrast to Epidemiological Evidence

September 21, 12:30 PM-02:30 PM

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#### [SAT-224] Divergent effects of peripheral and global depletion of Neuropeptide Y to the skeleton

September 21, 12:30 PM-02:30 PM

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### [SAT-235] Genome-wide association study on vitamin D levels in 423,722 White British individuals from UK Biobank reveals 48 novel vitamin D-related loci.

September 21, 12:30 PM-02:30 PM

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#### [SAT-236] Identification of Genetic Variants for Peak Bone Mineral Content in Young Adult Women

September 21, 12:30 PM-02:30 PM

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#### [SAT-237] Leveraging Unconfounded Genetic Risk Scores to Stratify Fracture Risk by Age at Onset

September 21, 12:30 PM-02:30 PM

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## [SAT-238] Lipidomic and Metabolomic Profiles in Women with Low and High Bone Mineral Density: Searching for Early Serum Metabolic Biomarkers for Osteoporosis Risk

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### [SAT-239] CRISPR-Cas9 mediated genome editing confirms EPDR1 as an effector gene at the BMD GWASimplicated 'STARD3NL' locus

September 21, 12:30 PM-02:30 PM

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#### [SAT-240] Genome-wide association meta-analysis identifies six loci for osteocalcin levels

September 21, 12:30 PM-02:30 PM

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#### [SAT-241] Adaptations of bone to exercise training in Nrf2KO rats are sex-specific

September 21, 12:30 PM-02:30 PM

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### [SAT-242] Prioritize Functional Variants in TBX15 Gene Associated with Osteoporosis and Obesity by Tissuespecific Epigenomic and Transcription Factor Binding Annotation

September 21, 12:30 PM-02:30 PM

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### [SAT-257] Osteocyte Sirt6 has crucial roles in bone and phosphate metabolism through senescence-dependent and -independent manner.

September 21, 12:30 PM-02:30 PM

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#### [SAT-258] C-FGF23 peptide protects against severe hypoferremia during acute inflammation

September 21, 12:30 PM-02:30 PM

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#### [SAT-259] Repetitive Mild Traumatic Brain Injury Impairs Fracture Healing in Mice

September 21, 12:30 PM-02:30 PM

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#### [SAT-260] Effects of a low dose 17β-HSD2 inhibitor treatment on osteoporosis based on an animal rat model

September 21, 12:30 PM-02:30 PM

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### [SAT-262] Vitamin D threshold ≥40ng/mL prevents arthralgia in aromatase inhibitors users: B-ABLE cohort study

September 21, 12:30 PM-02:30 PM

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## [SAT-263] CXCL12 Deletion in Osteoprogenitors Causes a Dramatic, Albeit Balanced, Increase in the Rate of Bone Remodeling and Attenuates the Loss of Cortical Bone Mass Caused by Estrogen Deficiency in Mice

September 21, 12:30 PM-02:30 PM

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### [SAT-264] Fetal FGF23 is required only to defend against hyperphosphatemia induced by maternal phosphate loading

September 21, 12:30 PM-02:30 PM

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#### **ISAT-2651 THE CONTRIBUTION OF OSTEOCYTE METABOLISM TO ACROMEGALIC OSTEOPATHY**

September 21, 12:30 PM-02:30 PM

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#### [SAT-266] Abrogation of the GH/IGF-1 axis in the osteoblast cell lineage is sex and compartment dependent

September 21, 12:30 PM-02:30 PM

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#### [SAT-285] Mechanoresponsive MiR-138-5p Targets MACF1 to Inhibit Bone Formation

September 21, 12:30 PM-02:30 PM

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### [SAT-286] Sptbn1 disruption increases osteocyte membrane fragility, leading to impaired cell viability and a blunted mechanotransduction response following mechanical loading

September 21, 12:30 PM-02:30 PM

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## [SAT-287] Irisin Attenuates Osteoarthritis by Inhibiting Apoptosis of Osteocyte through Activating Erk Signaling Pathway

September 21, 12:30 PM-02:30 PM

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#### [SAT-288] Interleukin-17 accelerates the development of osteoarthritis in murine model

September 21, 12:30 PM-02:30 PM

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## [SAT-289] 3D multiplexed imaging for multi-scale finite element analysis to examine bone mechanotransduction and heterogeneous activation of $\beta$ -catenin signaling in osteocytes

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### [SAT-290] Stretch-stimulus activates the mechano-sensitive channel, Piezo1 and the subsequent Ca2+ influx via L-type and T-type voltage-gated Ca2+ channels in osteocyte-like cells.

September 21, 12:30 PM-02:30 PM

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#### [SAT-291] Loading-induced expression of periosteal Osteocrin promotes bone growth

September 21, 12:30 PM-02:30 PM

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### [SAT-292] Fluid flow through the lacunocanalicular network and mechanoresponsiveness in a mouse tibial model

September 21, 12:30 PM-02:30 PM

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## [SAT-309] PTHrP Overexpression in Transgenic Mammary Tumors Causes Anorexia and White Adipose Tissue Lipolysis

September 21, 12:30 PM-02:30 PM

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### [SAT-310] Histochemical Assessment Of Abnormal Mineralization In Bone And Aorta Induced By Disrupted FGF23/αklotho

September 21, 12:30 PM-02:30 PM

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### [SAT-311] Bone matrix miR-125b inhibits bone resorption without affecting skeletal development and improves age-related changes in bone mass and quality

September 21, 12:30 PM-02:30 PM

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### [SAT-312] All-trans-retinoic-acid reduces intestinal phosphate uptake by the transcriptional regulation of type IIB sodium-dependent phosphate co-transporter gene (Npt2b)

September 21, 12:30 PM-02:30 PM

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### [SAT-313] Prevalence of vitamin D deficiency and inadequacy among U.S. older adults: The NHANES 2007-2014

September 21, 12:30 PM-02:30 PM

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#### [SAT-314] Stem Cell Osteogenic Differentiation as a Mechanism for Bioprosthetic Valve Calcification

September 21, 12:30 PM-02:30 PM

### [SAT-315] Abaloparatide exhibits greater osteo-anabolic response and higher cAMP stimulation and $\beta$ -arrestin recruitment than teriparatide

September 21, 12:30 PM-02:30 PM

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### [SAT-316] Treatment with an anti-PTHR1 mAb normalizes calcium levels and prevents weight loss in a transgenic mouse model of HHM.

September 21, 12:30 PM-02:30 PM

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#### [SAT-317] FGF23 Levels are Elevated in a Mouse Model of HHM

September 21, 12:30 PM-02:30 PM

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### [SAT-318] P27 Deletion Peotects against Estrogen Deficiency-Induced Osteoporosis by Inhibiting Oxidative Stress and Cell Senescence

September 21, 12:30 PM-02:30 PM

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### [SAT-337] Improved Skeletal Phenotype And Accelerated Intramembranous Bone Healing Post Tooth Extraction in Alox5 Knockout Senescent Female Mice

September 21, 12:30 PM-02:30 PM

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### [SAT-338] D3Cr muscle mass, DXA appendicular lean mass (ALM), and their relationships with "bone quality" and "muscle quality" in older men

September 21, 12:30 PM-02:30 PM

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### [SAT-339] Interplay between microRNAs and senescence-associated genes that regulate age- and radiotherapy-related bone damage

September 21, 12:30 PM-02:30 PM

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### [SAT-340] Identification of age-related regulatory networks of gene expression regulation in mouse calvarial bone by transcriptome and methylome analysis

September 21, 12:30 PM-02:30 PM

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### [SAT-341] Age-associated Increase in Kynurenine linhibits Autophagy and Promotes Senescence and Apoptosis in Bone Marrow Mesenchymal Stem Cells

September 21, 12:30 PM-02:30 PM

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#### [SAT-351] IRS1 and IRS2 are integral for longitudinal bone growth

September 21, 12:30 PM-02:30 PM

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#### [SAT-352] Usp53, a PTH target regulating cell lineage fate and bone turnover

September 21, 12:30 PM-02:30 PM

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#### [SAT-353] Loss of preBCR components affects the homeostasis of cranial bone

September 21, 12:30 PM-02:30 PM

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## [SAT-354] Emergence of an early osteoporotic phenotype in male Down syndrome mice resulting from aberrant trisomic Dyrk1a expression

September 21, 12:30 PM-02:30 PM

#### [SAT-355] Osteoclast-Osteoblast "Trans-pairing" across Cortical Bone Shapes Developing Long Bones

September 21, 12:30 PM-02:30 PM

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#### [SAT-356] Bromodomain-containing Protein Brd4 is Required for Proper Skeletal Formation

September 21, 12:30 PM-02:30 PM

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#### [SAT-357] Prevention of ectopic calcification by MGP: The role of its conserved residues

September 21, 12:30 PM-02:30 PM

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#### [SAT-358] Aberrant muscle tissue repair by mutant ACVR1 FOP progenitor cells

September 21, 12:30 PM-02:30 PM

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### [SAT-359] Girk3 deletion facilitates long bone growth through chondrocyte hypertrophy and limits the effect of opioids on the skeleton

September 21, 12:30 PM-02:30 PM

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### [SAT-360] Wnt7b expressed by hypertrophic chondrocytes is a critical inducer of bone formation during endochondral ossification

September 21, 12:30 PM-02:30 PM

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#### [SAT-361] Loss of ZIP10 in osteoblasts and chondrocytes impairs skeletal development and growth.

September 21, 12:30 PM-02:30 PM

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#### [SAT-362] Sarcopenia feature selection and risk prediction using machine learning

September 21, 12:30 PM-02:30 PM

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#### [SAT-386] Eif2ak4/GCN2 maintains bone homeostasis through regulation of skeletal stem cell proliferation

September 21, 12:30 PM-02:30 PM

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#### [SAT-387] Wnt responsive progenitor cells contribute to osseointegration of implants in lone bone.

September 21, 12:30 PM-02:30 PM

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### [SAT-388] Characterization of a novel perivascular DMP1+ osteoprogenitor associated with trans-cortical channels of long bone

September 21, 12:30 PM-02:30 PM

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#### [SAT-389] Oxidative Stress Partially Induces Tendon Cell Ossification via the ATP Metabolite Adenosine

September 21, 12:30 PM-02:30 PM

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### [SAT-390] Transgenic mice with improved spatiotemporal knockdown of Hdac3 in osteoprogenitor cells demonstrate low bone mass, high marrow fat, and osteoblastic lipid storage

September 21, 12:30 PM-02:30 PM

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### [SAT-391] LncRNA-BMNCR-Overexpressing Synovial Mesenchymal Stem Cells: Efficient Seed Cells for Bone Tissue Repair

September 21, 12:30 PM-02:30 PM

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### [SAT-392] The chemokine Cxcl12 regulates the bone mesenchymal/stromal cell homeostasis and marrow vascular morphogenesis

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#### [SAT-393] Gli1 labels a subpopulation of FAP cells that respond to muscle injury

September 21, 12:30 PM-02:30 PM

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### [SAT-394] Epigenetic Regulation of Bone Regeneration in Inflammation Disease

September 21, 12:30 PM-02:30 PM

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### [SAT-395] Differential Response of Superior and Dura Periosteum to Intermittent Treatment of Teriparatide in Cranial Bone Defect Repair

September 21, 12:30 PM-02:30 PM

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### [SAT-396] Calycosin ameliorates glucocorticoid-induced osteonecrosis of the femoral head by suppressing TLR4/ NF-kB pathway

September 21, 12:30 PM-02:30 PM

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### [SAT-417] Serum Exosomal MiRNAs as Candidate Diagnostic Biomarkers in Steroid- Induced Osteonecrosis of Femoral Head

September 21, 12:30 PM-02:30 PM

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## [SAT-418] CRISPR/Cas9-mediated ablation of osteoarthritis-associated genes attenuates osteoarthritis progression

September 21, 12:30 PM-02:30 PM

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#### [SAT-419] CRIF1 ameliorates autoimmune arthritis by suppressing Th17 cells

September 21, 12:30 PM-02:30 PM

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## [SAT-420] Microstructural analysis of subchondral trabecular bone in patients with osteoarthritis of the knee using second-generation high-resolution peripheral quantitative computed tomography (HR-pQCT)

September 21, 12:30 PM-02:30 PM

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#### [SAT-421] PDGF-BB Secreted by Pre-Osteoclasts Drives Subchondral bone Angiogenesis in OA Joints

September 21, 12:30 PM-02:30 PM

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#### [SAT-422] Cell Determination during the Development of Post-Traumatic Osteoarthritis

September 21, 12:30 PM-02:30 PM

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### [SAT-423] RGS12 is a critical proinflammatory factor in the pathogenesis of inflammatory arthritis via acting in Cox2-RGS12-NFkB pathway activation loop

September 21, 12:30 PM-02:30 PM

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### [SAT-424] Deficiency of mesenchymal miR-204/miR-211 induces multifaceted pathologic changes of osteoarthritis

September 21, 12:30 PM-02:30 PM

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#### [SAT-440] Truncating Mutations in Recql4 Cause a Low Bone Mass Phenotype, but Not Osteosarcoma

September 21, 12:30 PM-02:30 PM

### [SAT-441] Autophagy Suppression by Atg5 Deletion Led to Osteopenia in Mice through mTORC1 Downregulation

September 21, 12:30 PM-02:30 PM

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## [SAT-442] Macrophage-Lineage TRAP+ Cells Recruit Periosteum-Derived Cells for Periosteal Osteogenesis and Regeneration

September 21, 12:30 PM-02:30 PM

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### [SAT-443] Zbtb40 Loss-of-Function Inhibits Osteoblast Mineralization, Affecting Lumbar Spine Bone Mass in Mice

September 21, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

#### [SAT-444] Crosstalk between glycolysis and mitochondrial metabolism in osteoblasts

September 21, 12:30 PM-02:30 PM

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### [SAT-445] The Progressive Osteosclerosis of Fra1 Transgenic Mice is Independent of Lrp5 and Wnt1 Expression by Osteoblasts

September 21, 12:30 PM-02:30 PM

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### [SAT-446] Local administration of soluble Frizzled2 accelerates bony callus formation during bone fracture repair process in a mouse model

September 21, 12:30 PM-02:30 PM

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#### [SAT-447] Effect of SerpinB2 in mineralization, cytoprotection and proliferation of osteogenic cells

September 21, 12:30 PM-02:30 PM

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## [SAT-448] Conditional Ablation of mTOR in Early Stages of Osteoblast Lineage Results in Defective Skeletogenesis through the Regulation of PI3K/AKT-mediated Chondrocyte Terminal Differentiation

September 21, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

## [SAT-449] Biochemical and Molecular Characterization of the Osteoblastic Differentiation of Rat Bone Marrow Stem Cells Treated with KMN-159, a Novel Selective EP4 Prostaglandin Receptor Agonist

September 21, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

#### [SAT-450] Interleukin-6 signaling in osteoblasts promotes osteoclast differentiation

September 21, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

### [SAT-451] APP promotes osteoblast survival and bone formation by regulating mitochondrial function and preventing oxidative stress

September 21, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

#### [SAT-452] Macf1 Facilitates Nuclear Translocation of SMAD7 to Promote Bone Formation

September 21, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

## [SAT-453] Targeted deletion of Bmal1 in osteoblast causes differential effects on trabecular and cortical bone via BMP2 signaling pathway

September 21, 12:30 PM-02:30 PM

### [SAT-454] The Constitutive Photomorphogenesis 9 (COP9) Signalosome (CSN) Complex is Required for Proper Postnatal Skeletal Growth

September 21, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

### [SAT-455] Expression of TRAF3 by mature osteoblasts protects mice from age- and menopausal-related osteoporosis

September 21, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

#### [SAT-456] PGC-1α Deletion in Osteoblasts Causes Bone Loss through Inducing Mitochondrial Oxidative Stress

September 21, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

#### [SAT-457] The epigentic basis for bone development and homeostais: the role of Vitamin C

September 21, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

#### [SAT-458] Osteoblast-derived Wnt1 regulates cortical bone mass in adult mice

September 21, 12:30 PM-02:30 PM

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## [SAT-459] miR-196b-5p regulates osteogenic and adipogenic differentiation of mesenchymal progenitor cells and contributes to bone homeostasis by targeting semaphorin 3A

September 21, 12:30 PM-02:30 PM

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#### [SAT-460] Plasticity of Osteoblasts and Their Adipogenic Potential Dissected by Single-cell RNA-sequencing

September 21, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

#### [SAT-461] Tiki Regulates Bone Mass via the Inhibition of Wnt Signaling

September 21, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

#### [SAT-504] Tethering Function of Mitofusin2 Controls Osteoclast Differentiation

September 21, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

#### [SAT-505] Osteoclasts are a target of the sympathetic nervous system

September 21, 12:30 PM-02:30 PM

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#### [SAT-506] The CaV1.2 L-type calcium channel regulates bone homeostasis in the middle and inner ear

September 21, 12:30 PM-02:30 PM

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#### [SAT-507] L-Plastin Deficiency Produces Increased Trabecular Bone Due to reduced osteoclast function

September 21, 12:30 PM-02:30 PM

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### [SAT-508] Identification of RBP-J/NFATc1-miR182 as a novel network regulating inflammatory

### osteoclastogenesis and bone resorption

September 21, 12:30 PM-02:30 PM

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#### [SAT-509] Osteoclasts promote trabecular bone formation through the suppression of sclerostin expression

September 21, 12:30 PM-02:30 PM

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#### [SAT-510] Disruption of Heparan Sulfate-RAGE Interaction Impairs Osteoclastogenesis

September 21, 12:30 PM-02:30 PM

### [SAT-511] Comprehensive Analysis of Osteoclastogenic Proteome Reshaping Reveals a Novel Regulator of Osteoclast Differentiation and Function

September 21, 12:30 PM-02:30 PM

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### [SAT-512] CTLA4-Ig directly inhibited osteoclastogenesis by interfering with intracellular calcium oscillations in bone marrow macrophages

September 21, 12:30 PM-02:30 PM

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#### [SAT-513] Nrf2-Mediated Negative Regulation of MYC in Osteoclastogenesis

September 21, 12:30 PM-02:30 PM

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## [SAT-514] Slit-ROBO Rho GTPase Activating Protein 2 (SRGAP2) in Osteoclasts Limits Inflammatory Osteoclastogenesis and Inhibits Expression of the Coupling Clastokine SLIT3

September 21, 12:30 PM-02:30 PM

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#### [SAT-515] Ga13 restrains osteoclast function by cytoskeletal and mitochondrial regulation

September 21, 12:30 PM-02:30 PM

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### [SAT-516] TAK1 inhibition effectively alleviates joint inflammation as well as bone destruction in rheumatoid arthritis: Suppression of NLRP3 inflammasome-mediated inflammation and osteoclastic bone resorption.

September 21, 12:30 PM-02:30 PM

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#### [SAT-517] Novel Insights into the SHP2's Regulation of Osteoclastogenesis and Skeletal Remodeling

September 21, 12:30 PM-02:30 PM

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### [SAT-518] Hematopoietic stem cell-independent erythromyeloid progenitors in the yolk-sac give rise to osteoclasts contributing to the postnatal bone remodeling

September 21, 12:30 PM-02:30 PM

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#### [SAT-519] HES1 is a Novel Determinant of Osteoclast Differentiation

September 21, 12:30 PM-02:30 PM

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### [SAT-520] Cinacalcet hydrochloride improves bone disorder in chronic kidney disease by regulating osteoclast endoplasmic reticulum stress and autophagy

September 21, 12:30 PM-02:30 PM

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## [SAT-557] Regulatory mechanism of bone formation via Wnt/beta-catenin signaling by long non-coding RNA in osteocytes

September 21, 12:30 PM-02:30 PM

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### [SAT-558] PPARγ Regulation of Osteocyte Fuel Dependency and Capacity Contributes to the Balance of Systemic Energy Metabolism

September 21, 12:30 PM-02:30 PM

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#### [SAT-559] Osteocyte Oxidative Stress Following Estrogen Loss, Microdamage and Disuse

September 21, 12:30 PM-02:30 PM

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#### [SAT-560] Mechanical Loading Reduces the Adverse Effects of Fatty Acid Overload on Osteocytes

September 21, 12:30 PM-02:30 PM

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### [SAT-561] Impaired 1,25 dihydroxyvitamin D action contributes to the abnormalities in lacuno-canalicular remodeling observed in the Hyp mouse model of XLH

September 21, 12:30 PM-02:30 PM

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#### [SAT-562] Mechanical Loading-induced Changes in the Sclerostin Distribution around Osteocytes

September 21, 12:30 PM-02:30 PM

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### [SAT-563] Live Cell and Intravital Imaging Reveals Differences in Mitochondrial Redox State, Morphology and Number between Osteoblasts and Osteocytes

September 21, 12:30 PM-02:30 PM

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#### [SAT-564] Accelerated aging and bone loss in mice lacking PTH receptor in osteocytes

September 21, 12:30 PM-02:30 PM

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#### [SAT-565] Hyperglycemia Alters Gene Expression of Sclerostin but not RANKL in Ocy454 Osteocytes

September 21, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

#### [SAT-566] Progranulin Has Pro-Inflammatory Effects In Bone

September 21, 12:30 PM-02:30 PM

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### [SAT-567] Osteocyte estrogen receptor-beta affects bone turnover and skeletal mechanotransduction differently in young and adult male mice.

September 21, 12:30 PM-02:30 PM

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## [SAT-589] MRI-based textural analysis of trabecular bone: a novel method for opportunistic screening of bone quality

September 21, 12:30 PM-02:30 PM

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### [SAT-590] Force to Fracture: Simplified Biomechanical Model of Osteoporotic Fractures for the Medical Provider

September 21, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

#### [SAT-591] Local bone density defects in patients with femoral neck fracture

September 21, 12:30 PM-02:30 PM

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### [SAT-592] Stratification of fracture risk in type 2 Diabetes: development and validation of clinical algorithms from a task force of relevant medical societies

September 21, 12:30 PM-02:30 PM

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### [SAT-593] DXA appendicular lean mass, FRAX, BMD and incident fractures: Findings from the Women's Health Initiative (WHI)

September 21, 12:30 PM-02:30 PM

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# [SAT-594] External bone size predicts age-changes in femoral neck structure and mass leading to increased fracture risk independent of bone mineral density: Findings from the Study of Women's Health Across the Nation and the Study of Osteoporotic Fractures in Men

September 21, 12:30 PM-02:30 PM

#### [SAT-595] Potential Impact of Recent Clinical Vertebral Fracture on FRAX 10-year Probability

September 21, 12:30 PM-02:30 PM

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#### [SAT-596] Anatomical factors associated with female femoral neck fractures in Beijing women

September 21, 12:30 PM-02:30 PM

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### [SAT-597] Comparison of the predictive ability of quantitative and qualitative scoring methods of osteoporotic vertebral fractures using operational skeletal fragility outcomes

September 21, 12:30 PM-02:30 PM

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## [SAT-598] Prevalence of Spinal Osteoporosis in Women and Men Considering Both Bone Strength and Volumetric BMD — A Comparison of Caucasians (in the United States) and Koreans (in Korea)

September 21, 12:30 PM-02:30 PM

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### [SAT-599] Measured Height Loss Predicts Incident Clinical Fractures Independently from FRAX: A Registry-Based Cohort Study

September 21, 12:30 PM-02:30 PM

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### [SAT-600] Effect of Soft Tissue Corrections on Trabecular Bone Score (TBS) in Women and Men with Type 2 Diabetes: A Rising Tide Floats All Boats

September 21, 12:30 PM-02:30 PM

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### [SAT-601] Bone remodeling measurement by quantifying new bone formation and resorbed bone mass in calcified bones using quantitative computed tomography

September 21, 12:30 PM-02:30 PM

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### [SAT-602] Postmenopausal Women Presenting for Spinal Fusion Surgery Have Abnormal Microarchitecture Despite Normal DXA

September 21, 12:30 PM-02:30 PM

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### [SAT-631] Five-fold Increased Atypical Femur Fracture Risk Among North American Asians is Similar Across Asian Ethnic Subgroups and Is Not Explained by Confounding Variables

September 21, 12:30 PM-02:30 PM

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### [SAT-632] Risk of osteoporosis with non-vitamin K antagonist oral anticoagulant vs. warfarin among patients with atrial fibrillation: a real-world nationwide propensity score-matched cohort study

September 21, 12:30 PM-02:30 PM

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### [SAT-633] Type 2 Diabetes Mellitus and the risk of osteoporotic vertebral fractures: a meta-analysis of summary and individual participant data from 852,705 individuals

September 21, 12:30 PM-02:30 PM

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### [SAT-634] Positive effects of low LDL-C and statins on bone mineral density: an integrated epidemiological observation analysis and Mendelian Randomization study

September 21, 12:30 PM-02:30 PM

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### [SAT-635] Longitudinal changes in bone mineral density during perimenopausal transition: the Vietnam Osteoporosis Study

West Hall C/Orange County Convention Center

### [SAT-636] Relationship between Serum Sclerostin and the Bone Mass Measured by Quantitative Ultrasound in Community-Dwelling Men and Women Aged 40 Years and Over in Japan

September 21, 12:30 PM-02:30 PM

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### [SAT-637] Cardiovascular events in a population-based observational cohort of bisphosphonate users and untreated control subjects linked to BMD and comorbidity information

September 21, 12:30 PM-02:30 PM

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### [SAT-638] Secular Trends of Hip Fractures in Lebanon 2006 – 2017: Implications for Clinical Practice and Public Health Policy

September 21, 12:30 PM-02:30 PM

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#### [SAT-639] The Pattern of Incident Fractures in Patients with Type 2 Diabetes Mellitus

September 21, 12:30 PM-02:30 PM

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### [SAT-640] The Risk of Hip and Non-Vertebral Fractures in Parkinson's Disease: A Systematic Review and Meta-Analysis

September 21, 12:30 PM-02:30 PM

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#### [SAT-641] Differential Risk of Fracture Attributable to Type 2 Diabetes Mellitus According to Skeletal Site

September 21, 12:30 PM-02:30 PM

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## [SAT-642] Associations of Clinically Unrecognized vs Clinically Recognized Vertebral Fracture with Subsequent Mortality

September 21, 12:30 PM-02:30 PM

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### [SAT-643] Effect of Time Since Prior Fracture on Mortality at the Time of Clinical Assessment: A Registry-Based Cohort Study

September 21, 12:30 PM-02:30 PM

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### [SAT-644] Real-World Outcomes and Imminent Fractures After Index Fragility Fracture: A Population Study

September 21, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

### [SAT-645] Lower-extremity muscle power and grip strength are related to HR-pQCT radius and tibia bone parameters

September 21, 12:30 PM-02:30 PM

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### [SAT-646] The Association between Osteocalcin, Adiposity and Bone health: results from a population-based cohort

September 21, 12:30 PM-02:30 PM

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### [SAT-647] Does the Size, Speed and Timing of Pubertal Growth Impact Fracture in Later Life? The 1946 British Birth Cohort

September 21, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

## [SAT-648] Different Trends in Bone Mineral Density and Osteoporosis among Adults with Type 2 Diabetes, Living in the United States, 2005-2006 through 2013-2014

West Hall C/Orange County Convention Center

### [SAT-649] Detecting Causal Relationship Between Multiple Risk Factors and Osteoporosis Using Multivariable Mendelian Randomization

September 21, 12:30 PM-02:30 PM

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### [SAT-687] REAL-WORLD OUTCOMES AND COST OF MANAGEMENT OF OSTEOPOROTIC FRACTURES IN ONTARIO, CANADA

September 21, 12:30 PM-02:30 PM

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### [SAT-688] True costs of patient management over 18 months following a hip, vertebral, distal radius, or proximal humerus fragility fracture in France – Results from the ICUROS Study

September 21, 12:30 PM-02:30 PM

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### [SAT-689] Social Isolation: An Important Predictor of Adverse Events and Patient Reported Outcome Measures (PROMs) in Elderly Hip Fracture Patients

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#### [SAT-690] Improved Osteoporosis Treatment Rates Utilizing a Multidisciplinary Team Approach

September 21, 12:30 PM-02:30 PM

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### [SAT-691] Improving Pain Control Following Fractures in the Emergency Department: the PAINFREE Initiative

September 21, 12:30 PM-02:30 PM

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## [SAT-692] A pioneering attempt to approach non-responders to FLS invitation by home visits and questionnaires.

September 21, 12:30 PM-02:30 PM

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## [SAT-693] A Hardware and software integrated system enhance the treatment effect in osteoporosis patients' whole process management using internet and Internet of Things in China

September 21, 12:30 PM-02:30 PM

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## [SAT-706] The Effect of Exercise or Bisphosphonate Use on Bone Density and Microarchitecture among Postmenopausal Women with Low Bone Mass Experiencing Modest Weight Loss

September 21, 12:30 PM-02:30 PM

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### [SAT-707] Evaluating the Relationship Between Physical Activity Level and Bone Structure: a pQCT Analysis September 21, 12:30 PM-02:30 PM

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## [SAT-708] Effectiveness of Resistance and Jump Training or Machine-based Isometric Training for Middle-aged and Older Men with Osteopenia and Osteoporosis: LIFTMOR for Men Trial Preliminary Findings

September 21, 12:30 PM-02:30 PM

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## [SAT-709] High impact exercise increased femoral neck bone density with no adverse effects on imaging markers of knee osteoarthritis in postmenopausal women

September 21, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

### [SAT-710] A comparison of DXA-derived bone responses to impact versus resistance training in young adult women: The OPTIMA-Ex trial.

West Hall C/Orange County Convention Center

### [SAT-711] Fermented Dairy Consumption and Risk of Fractures in Postmenopausal Women: Is There an Association? Women's Health Initiative Study (WHI)

September 21, 12:30 PM-02:30 PM

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#### [SAT-712] Identification of factors that affect serum levels of 25-hydroxyvitamin D

September 21, 12:30 PM-02:30 PM

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### [SAT-713] Time of Day Does Not Appear to Influence Changes in Bone Biomarkers in Response to Exercise

September 21, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

## [SAT-728] TRAF3 in mesenchymal progenitor cells limits low-level chronic inflammation associated with osteoporosis by inhibiting GSK-3β induced NF-KB activation

September 21, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

### [SAT-729] Interactive Effects of Lactation History and Estrogen Status on Cellular Activities of Rat Maternal Bone

September 21, 12:30 PM-02:30 PM

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## [SAT-730] Inverse correlation between trabecular bone volume and bone marrow adipose tissue in rats treated with osteoanabolic agents

September 21, 12:30 PM-02:30 PM

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## [SAT-737] Long term consequences of bariatric surgery: the obesity of bone and a subnormal ratio of bone mass to body weight

September 21, 12:30 PM-02:30 PM

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### [SAT-738] Utility of Trabecular Bone Score (TBS) for Fracture Risk Assessment in Glucocorticoid-Induced Osteoporosis

September 21, 12:30 PM-02:30 PM

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### [SAT-739] Impaired Cortical and Trabecular microstructure of Proximal Femur in HIV-infected Men Compared to Age-matched Uninfected Men measured by 3D Cortical Bone Mapping

September 21, 12:30 PM-02:30 PM

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## [SAT-740] Effects of SGLT2 Inhibitors on Fractures and Bone Mineral Density in Type 2 Diabetes Mellitus: An Updated Meta-analysis

September 21, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

### [SAT-741] Glycemic control and changes in hip bone mineral density in men and women with type 2 diabetes: The Health, Aging and Body Composition Study

September 21, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

#### [SAT-742] Trabecular Bone Score and Bone Mineral Density in Adults with Cystic Fibrosis

September 21, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

## [SAT-743] Fabry disease: elevated prevalence of vertebral fractures and correlation with Mainz Severity Score Index

West Hall C/Orange County Convention Center

[SAT-744] Subclinical hyperthyroidism is associated with increased fracture risk: The MrOS Sweden Study

September 21, 12:30 PM-02:30 PM

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[SAT-745] Rheumatoid Arthritis Disease Activity is Associated with Lower Femoral Neck Bone Mineral Density

September 21, 12:30 PM-02:30 PM

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[SAT-764] Effects of ibandronate on bone mineral density and microstructure in patients with primary osteoporosis after treatment with teriparatide

September 21, 12:30 PM-02:30 PM

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[SAT-765] A sensitive method to monitor the migration of human bone marrow mesenchymal stem cells in mice models.

September 21, 12:30 PM-02:30 PM

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[SAT-766] Modeling-based Bone Formation Persists in the Femoral Neck Despite Remodeling Inhibition in Subjects Treated with Denosumab

September 21, 12:30 PM-02:30 PM

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[SAT-767] Effect of Bisphosphonate on Prevention of Bone Loss after Gastrectomy: A Randomized Controlled Trial

September 21, 12:30 PM-02:30 PM

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[SAT-768] Predictors of Bone Treatment Recommendation Following Fragility Fracture Within the UK

September 21, 12:30 PM-02:30 PM

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[SAT-769] Osteosarcoma Surveillance Program Using Real World Data from US Pharmacy Claims Linked to State Cancer Registry Data to Estimate the Incidence of Osteosarcoma Among Patients Treated with Teriparatide (Forteo)

September 21, 12:30 PM-02:30 PM

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[SAT-770] A POST HOC ANALYSIS OF ROMOSOZUMAB EFFICACY AND BASELINE FRACTURE RISK – GREATER REDUCTION IN FRACTURE OUTCOMES IN PATIENTS AT HIGHER RISK

September 21, 12:30 PM-02:30 PM

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[SAT-771] Denosumab 10 Year Simulation of Bone Remodeling In Human Biopsies

September 21, 12:30 PM-02:30 PM

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[SAT-772] The early effect of the anti-sclerostin antibody

September 21, 12:30 PM-02:30 PM

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[SAT-773] The impact of switching short-term teriparatide to denosumab comparing with treating denosumab alone in patients with osteoporotic hip fracture: 1-year follow-up

September 21, 12:30 PM-02:30 PM

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[SAT-774] Is severely suppressed bone turnover in patients on long term bisphosphonate treatment causally related atypical femoral fracture?

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### [SAT-775] Bone Balance in Postmenopausal Women Treated with Combined High-Dose Teriparatide and Denosumab: The DATA-HD Randomized Controlled Trial

September 21, 12:30 PM-02:30 PM

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#### [SAT-776] Risk predictors for seniors at imminent risk of fracture

September 21, 12:30 PM-02:30 PM

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### [SAT-777] To determine the therapeutic potential of senolytic bone marrow MSCs for frailty with bone fracture

September 21, 12:30 PM-02:30 PM

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### [SAT-778] Study of Twice-Weekly Injections of Teriparatide by Comparing Efficacy with Once-Weekly Injections in Osteoporosis Patients: The TWICE Study

September 21, 12:30 PM-02:30 PM

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## [SAT-779] Assessment and risk factors of denosumab discontinuation in women with postmenopausal osteoporosis on telephone survey.

September 21, 12:30 PM-02:30 PM

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#### [SAT-780] The effect of only daily teriparatide without calcium and vitamin D supplementation

September 21, 12:30 PM-02:30 PM

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#### [SAT-781] Bisphophonates Prevent Bone Loss Associated with Denosumab Treatment Discontinuation

September 21, 12:30 PM-02:30 PM

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#### [SAT-821] Gut Microbiota-Derived Outer Membrane Vesicle Promotes Skeletal Bone Mass in Aging Mice

September 21, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

# [SAT-822] Suppression of RANKL expression using a CRISPR interference transgene mimics gene deletion in mice: a loss-of-function approach that may offer improved cell type-specificity compared to the Cre-loxP system

September 21, 12:30 PM-02:30 PM

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#### [SAT-823] Possible roles of IL-12 cytokine family in management of post-menopausal osteoporosis

September 21, 12:30 PM-02:30 PM

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#### [SAT-824] The Composition Of The Gut Microbiota Is A Non-Genomic Contributor To Bone Mass Heritability

September 21, 12:30 PM-02:30 PM

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#### [SAT-833] Insights from Lexicon Pharmaceuticals' Genome5000™ Mouse Gene Knockout Campaign

September 21, 12:30 PM-02:30 PM

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#### [SAT-834] Novel model of restricted mobility induced skeletal detriment in zebrafish (Danio rerio)

September 21, 12:30 PM-02:30 PM

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### [SAT-835] Anti-interleukin-6 therapy (tocilizumab) improves chronic hip synovitis and bone healing in a piglet model of ischemic osteonecrosis of the femoral head

West Hall C/Orange County Convention Center

#### [SAT-836] The SH3BP2-SYK Axis Regulates Alveolar Bone Loss in a Mouse Model for Periodontitis

September 21, 12:30 PM-02:30 PM

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#### [SAT-837] Novel partial weight bearing model leads to dose-dependent skeletal deficits in rats

September 21, 12:30 PM-02:30 PM

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#### [SAT-838] Investigating Global Changes in Gene Expression in a Murine Model of Cherubism

September 21, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

### [SAT-839] Time Course of Cortical Porosity Development in Mice with Adenine-Induced Chronic Kidney Disease

September 21, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

#### [SAT-840] CaMKK2-AMPK-p38 MAPK Axis in Osteoarthritis

September 21, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

### [SAT-841] The Osteopenic Phenotype Observed in Winnie Mice Model of Inflammatory Bowel Disease Is Associated with Alterations in The Canonical Beta-Catenin Pathway

September 21, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

### [SAT-842] Treatment-induced cortical porosity infilling in an animal model of Progressive Chronic Kidney Disease

September 21, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

## [SAT-843] Targeted Deletion of Erythropoietin Receptor (EPOR) in Schwann Cells Abolishes the Neuroprotective Effect of EPO on Peripheral Nerve Injury Recovery and Exacerbates Muscle Atrophy

September 21, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

#### [SAT-844] OI fractures show delayed healing and increased possibility of re-fracture in murine models

September 21, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

#### [SAT-869] Different effects of Abaloparatide and hPTH(1-34) on Bone Resorption and Bone Formation

September 21, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

### [SAT-870] Bone vascular remodeling and pericytes mobilization during the transient anabolic response to antisclerostin antibodies treatment and its rescue by iPTH

September 21, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

### [SAT-871] Comparisons between Teriparatide and Abaloparatide on Their Anabolic Effects and Responses to Treatment Discontinuation in Ovariectomized (OVX) Rats

September 21, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

### [SAT-872] Chemical Homing to Localize Anabolic Extracellular Matrix Cues to Accelerate Bone Fracture Repair

September 21, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

## [SAT-873] A blueberry-enriched diet counteracts the effects of estrogen deficiency in mice on bone, skeletal muscle, and peripheral fat, and alters the gut microbiome.

West Hall C/Orange County Convention Center

### [SAT-874] Dynamics of Modeling- and Remodeling-Based Bone Formation in Response to Intermittent Parathyroid Hormone (PTH) in Male, Female, and Ovariectomized (OVX) Rats

September 21, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

#### [SAT-875] Effects of a novel EP4 agonist on bone metabolism in vitro

September 21, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

### [SAT-890] Mazabraud syndrome is often associated with complications of FD/MAS; a multicenter international cohort study.

September 21, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

### [SAT-891] Teriparatide (TPTD) for Premenopausal Idiopathic Osteoporosis: A Randomized Single Switch-Over Trial

September 21, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

### [SAT-892] A Phase 1 PK/PD Study of Once vs Twice Daily Administration of rhPTH(1-84) in Patients With Hypoparathyroidism: Interim Analysis

September 21, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

### [SAT-893] Physical Function and Health-Related Quality of Life in Adults Treated with Asfotase Alfa for Pediatric-Onset Hypophosphatasia

September 21, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

## [SAT-894] The Impact of Musculoskeletal Comorbidities of X-Linked Hypophosphatemia on Gait and Functional Range of Motion

September 21, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

## [SAT-895] Identification of a mutation in the first $\beta$ -propeller domain of LRP4 in a sclerosteosis patient broadens the LRP4 mutation spectrum

September 21, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

### [SAT-896] Intermittent Parathyroid Hormone Treatment Reduces Marrow Adipose Tissue In Patients With Hypoparathryoidism

September 21, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

#### [SAT-897] Clinical and Biochemical Phenotypes of Adults with Monoallelic and Biallelic ENPP1 Mutations

September 21, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

# [SAT-898] Hypophosphatemic Osteosclerosis Associated With Novel Homozygous Mutations Of DMP1 Encoding Dentin Matrix Protein 1 and SPP1 Encoding Osteopontin: The First Digenic SIBLING Protein Osteopathy

September 21, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

#### [SAT-916] Multiple Modalities of Signaling by FOP Mutant BMP Receptor in the Developing Zebrafish

September 21, 12:30 PM-02:30 PM

### [SAT-917] MEKK2 Mediates Pathologic ERK Activation Downstream of NF1 in Osteoblasts In Vitro and In Vivo

September 21, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

### [SAT-918] Notch2 Antisense Oligonucleotides Ameliorate the Osteopenia of Hajdu Cheney Syndrome Mutants

September 21, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

#### [SAT-919] New mouse model with Ifitm5 S42L connects types V and VI osteogenesis imperfecta

September 21, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

#### [SAT-920] Therapeutic Targeting of Autophagy in Osteogenesis Imperfecta

September 21, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

### [SAT-921] X-Linked Hypophosphatemia: All Eight Individuals Representing Separate American Families Carrying the PHEX 3'UTR Mutation c.\*231A>G Tested Positive for an Exon 13-15 Duplication

September 21, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

## [SAT-922] Detection of GNAS Mutations in Circulating Cell Free DNA in Patients with Fibrous Dysplasia of bone/McCune Albright Syndrome (FD/MAS)

September 21, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

### [SAT-923] Fibrous dysplasia exhibits increased array of cytokines in peripheral blood and bone marrow stromal cells

September 21, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

### [SAT-924] Effect of Zolendronic Acid Treatment on Bone in +/G610C Mouse Model of Osteogenesis Imperfecta

September 21, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

### [SAT-925] SIRT1 Promoter SNP rs932658 Associated with Bisphosphonates-related Osteonecrosis of the Jaw

September 21, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

### [SAT-926] Heterozygous SH3BP2 Cherubism Mutation Exacerbates Alveolar Bone Loss in a Mouse Model for Periodontitis

September 21, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

### [SAT-927] Plasma miR-145 is a Prognostic Biomarker to Evaluate Risk of Reaching Surgical Threshold in Adolescent Idiopathic Scoliosis (AIS) – a 6 Years Longitudinal Study Beyond Skeletal Maturity

September 21, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

### [SAT-950] The Role of Individual Components of Sarcopenia and Their Rate of Decline in Fracture Risk in Elderly Women and Men

September 21, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

#### [SAT-951] Higher Circulating Standardized 25(OH)D is Not Associated With Increased Falls Risk

September 21, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

### [SAT-952] Effect of High-Intensity Interval Training on Peripheral Quantitative Computed Tomography Measures of Quadriceps Muscle and Adipose Tissue Properties in Obese, Osteopenic Older Women

September 21, 12:30 PM-02:30 PM

#### [SAT-953] Muscle dysfunction in Female Fibroblast Growth Factor 2 Knockout Mice

September 21, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

### [SAT-954] One Leg Standing Time Predicts Fractures in Older Women Independent of Clinical Risk Factors and Bone Mineral Density

September 21, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

### [SAT-955] Effectiveness of a Systematic Multifactorial Falls Risk Screening, Assessment and Management Intervention to Reduce In-Hospital Falls in Older Patients

September 21, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

#### [SAT-956] TRAF6 mediates impaired muscle regeneration induced by TNFa

September 21, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

### **Oral Poster Session I: Basic & Translational**

September 21, 2019, 12:45 PM

West Hall C/Orange County Convention Center

New this year! Come hear a select number of plenary poster presenters give an overview of their poster on digital touch screen displays. Following the oral poster presentations, visit their poster board to ask questions and continue the discussion.

#### [FRI-174] DDRGK1 is required for the proper chondrogenesis and the regulation of osteochondroprogenitors

September 21, 12:45 PM-12:50 PM

West Hall C/Orange County Convention Center

## [FRI-175] Pinch regulates chondrogenesis by control of TGF-β1 signaling and expression of Sox9 and Runx2 in chondrocytes

September 21, 12:50 PM-12:55 PM

West Hall C/Orange County Convention Center

## [FRI-92] The Muscle Metabolite, β-aminoisobutyric acid, L-BAIBA, Enhances the Effects of Suboptimal Mechanical Loading on New Bone Formation.

September 21, 01:00 PM-01:05 PM

West Hall C/Orange County Convention Center

### [FRI-181] Runx1 Mediates Articular Cartilage Repair in Osteoarthritis through Upregulating Yap and Downregulating Wnt/β-catenin Signaling Pathway

September 21, 01:05 PM-01:10 PM

West Hall C/Orange County Convention Center

#### [FRI-135] PREX1 drives spontaneous bone metastasis of ER+ breast cancer cells

September 21, 01:10 PM-01:15 PM

West Hall C/Orange County Convention Center

#### [FRI-136] TBK1/IKKε inhibitor Amlexanox blocks Multiple Myeloma cell growth in vitro and in vivo

September 21, 01:15 PM-01:20 PM

West Hall C/Orange County Convention Center

## [FRI-219] Housing temperature influences bone and brown adipose tissue side effects of atypical antipsychotic drugs in female mice

September 21, 01:20 PM-01:25 PM

West Hall C/Orange County Convention Center

#### [FRI-138] Circulating osteocalcin-positive cells predict the progression of breast cancer bone metastasis

September 21, 01:25 PM-01:30 PM

West Hall C/Orange County Convention Center

[FRI-30] Material Properties of Cortical Bone Do Not Differ between Donors with and without Type 2 Diabetes

September 21, 01:30 PM-01:35 PM

West Hall C/Orange County Convention Center

### **Oral Poster Session I: Clinical**

September 21, 2019, 12:45 PM

West Hall C/Orange County Convention Center

New this year! Come hear a select number of plenary poster presenters give an overview of their poster on digital touch screen displays. Following the oral poster presentations, visit their poster board to ask questions and continue the discussion.

#### [FRI-75] Molecular Mechanisms for Pamidronate Rescue of Post-burn Muscle Loss in Children

September 21, 12:45 PM-12:50 PM

West Hall C/Orange County Convention Center

#### [FRI-591] Local bone density defects in patients with femoral neck fracture

September 21, 12:50 PM-12:55 PM

West Hall C/Orange County Convention Center

### [FRI-632] Risk of osteoporosis with non-vitamin K antagonist oral anticoagulant vs. warfarin among patients with atrial fibrillation: a real-world nationwide propensity score-matched cohort study

September 21, 12:55 PM-01:00 PM

West Hall C/Orange County Convention Center

#### [FRI-2] In vivo detection of vasculature and fat within cortical bone pores: a validation study

September 21, 01:00 PM-01:05 PM

West Hall C/Orange County Convention Center

### [FRI-3] An Overview of the Etiology, Clinical Manifestations, Management Strategies, and Complications of Hypoparathyroidism from the Canadian National Hypoparathyroidism Registry

September 21, 01:05 PM-01:10 PM

West Hall C/Orange County Convention Center

### [FRI-5] Clinical, Biochemical and Radiological Profile of Normocalcaemic Hyperparathyroidism: a Multicentric Cross-Sectional Evaluation

September 21, 01:10 PM-01:15 PM

West Hall C/Orange County Convention Center

### [FRI-420] Microstructural analysis of subchondral trabecular bone in patients with osteoarthritis of the knee using second-generation high-resolution peripheral quantitative computed tomography (HR-pQCT)

September 21, 01:15 PM-01:20 PM

West Hall C/Orange County Convention Center

## [FRI-204] First Report of Burosumab (Anti-FGF23 Monoclonal Antibody) for Rickets Complicating HRAS-Associated Cutaneous Skeletal Hypophosphatemia Syndrome

September 21, 01:20 PM-01:25 PM

West Hall C/Orange County Convention Center

#### [FRI-421] PDGF-BB Secreted by Pre-Osteoclasts Drives Subchondral bone Angiogenesis in OA Joints

September 21, 01:25 PM-01:30 PM

West Hall C/Orange County Convention Center

### [FRI-424] Deficiency of mesenchymal miR-204/miR-211 induces multifaceted pathologic changes of osteoarthritis

September 21, 01:30 PM-01:35 PM

### Symposium: Genetics in the Bone Clinic: From Rare to Complex

September 21, 2019, 02:45 PM

Valencia Ballroom A/Orange County Convention Center

- · Stuart Ralston MD, University of Edinburgh, United Kingdom, Chair
- · Andre Uitterlinden PhD, Rm Ee 575, Genetic Laboratory, Netherlands, Chair

#### Rare and Complex Genetics in the Bone Clinic

· Brent Richards MD, McGill University, Canada

September 21, 02:45 PM-03:10 PM

Valencia Ballroom A/Orange County Convention Center

#### Clinical Applications Through Genome Interrogation in BioVU

Nancy Cox PhD, Vanderbilt University Medical Center

September 21, 03:10 PM-03:35 PM

Valencia Ballroom A/Orange County Convention Center

#### **Mendelian Diseases in the Bone Clinic**

· Outi Makitie MD, PhD, Children s Hospital, University of Helsinki, Finland

September 21, 03:35 PM-04:00 PM

Valencia Ballroom A/Orange County Convention Center

### Symposium: Mineralization Gone Awry

September 21, 2019, 02:45 PM

Valencia Ballroom B-D/Orange County Convention Center

- · Carolyn Macica PhD, Frank H. Netter School of Medicine Quinnipiac University, United States, Chair
- Maurizio Pacifici PhD, Children s Hospital of Philadelphia, United States, Chair

#### Mineralization Mechanisms in the Extracellular Matrix in Health and Disease

Marc McKee PhD, McGill University, Canada

September 21, 02:45 PM-03:10 PM

Valencia Ballroom B-D/Orange County Convention Center

#### **Heterotopic Ossification in FOP**

• Eileen Shore PhD, University of Pennsylvania, United States

September 21, 03:10 PM-03:35 PM

Valencia Ballroom B-D/Orange County Convention Center

#### **Vascular Calcification**

· LINDA DEMER MD, PhD, UCLA, United States

September 21, 03:35 PM-04:00 PM

Valencia Ballroom B-D/Orange County Convention Center

### **Networking Break**

September 21, 2019, 04:00 PM

Valencia Foyer/Orange County Convention Center

### Concurrent Orals: Energy Metabolism: Bone, Muscle and Fat

September 21, 2019, 04:15 PM

Valencia Ballroom A/Orange County Convention Center

- · Anyonya Guntur PhD, Maine medical center research institute, United States, Moderator
- Christa Maes PhD, KU Leuven, Belgium, Moderator

[1051] Identification of novel factors involved in the coupling of bone resorption and bone formation in humans reveals RANKL/DPP4 as a new link between bone remodeling and energy metabolism

September 21, 04:15 PM-04:30 PM

Valencia Ballroom A/Orange County Convention Center

#### [1052] Dual Role of Carboxypeptidase E (CPE) in Regulation of Energy Metabolism and Bone Mass

September 21, 04:30 PM-04:45 PM

Valencia Ballroom A/Orange County Convention Center

### [1053] Resistance to Lrp5 Inhibitors Protects Bone Mass and Improves Glucose Metabolism in Type 1 Diabetes

September 21, 04:45 PM-05:00 PM

Valencia Ballroom A/Orange County Convention Center

#### [1054] Lipocalin2 promotes b-cell function to prevent glucose intolerance in obesity in humans and mice

September 21, 05:00 PM-05:15 PM

Valencia Ballroom A/Orange County Convention Center

#### [1055] Lipocalin-2 is anorexigenic in humans and in non-human primates

September 21, 05:15 PM-05:30 PM

Valencia Ballroom A/Orange County Convention Center

### [1056] PTH receptor signaling in the adipocyte improves glucose homeostasis and is required for skeletal anabolism

September 21, 05:30 PM-05:45 PM

Valencia Ballroom A/Orange County Convention Center

### **Concurrent Orals: Nutrition and Exercise**

September 21, 2019, 04:15 PM

Valencia Ballroom B-D/Orange County Convention Center

· Sue Shapses PhD, Rutgers University, United States, Moderator

#### [1057] Effects of Vitamin D on the Risk of Falls in the VITamin D and OmegA-3 TriaL (VITAL)

September 21, 04:15 PM-04:30 PM

Valencia Ballroom B-D/Orange County Convention Center

## [1058] Effect of Dietary Protein Intake on Bone Mineral Density and Fracture Incidence in Older Adults in the Health, Aging, and Body Composition Study

September 21, 04:30 PM-04:45 PM

Valencia Ballroom B-D/Orange County Convention Center

### [1059] Changes in Distal Tibial Bone Microarchitecture in Response to 8 Weeks of US Army Basic Combat Training in Men and Women

September 21, 04:45 PM-05:00 PM

Valencia Ballroom B-D/Orange County Convention Center

### [1060] Indicators of Energetic Status are Predictive of Bone Turnover Markers in Exercising Women with Menstrual Disturbances

September 21, 05:00 PM-05:15 PM

Valencia Ballroom B-D/Orange County Convention Center

### [1061] Loss in DXA-Estimated Total Body Lean Mass but not Fat Mass Predicts Incident Major Osteoporotic Fracture and Hip Fracture Independently from FRAX: A Registry-Based Cohort Study

September 21, 05:15 PM-05:30 PM

Valencia Ballroom B-D/Orange County Convention Center

### [1062] Increases in Visceral Adipose Tissue Over Six Years Result in Lower Paraspinal Muscle Density in Men and Women: the Framingham Study

September 21, 05:30 PM-05:45 PM

Valencia Ballroom B-D/Orange County Convention Center

### **Concurrent Orals: Osteoblasts**

September 21, 2019, 04:15 PM

W315/Orange County Convention Center

Cheryl Ackert-Bicknell PhD, Center for Musculoskeletal Research University of Rochester, United States, Moderator

#### [1063] YAP and TAZ mediate osteoprogenitor mobilization for primary ossification center development

September 21, 04:15 PM-04:30 PM

W315/Orange County Convention Center

#### [1064] Fip200, an Essential Autophagy Gene, Mediates the Anabolic Action of PTH in Bone

September 21, 04:30 PM-04:45 PM

W315/Orange County Convention Center

## [1065] Discoidin domain receptor 2 functions in skeletal progenitor cells and chondrocytes to control cartilage growth and postnatal bone formation

September 21, 04:45 PM-05:00 PM

W315/Orange County Convention Center

### [1066] Cell-type-distinct regulatory action of Runx2 on the genome underlies its distinct roles in osteoblasts and chondrocytes

September 21, 05:00 PM-05:15 PM

W315/Orange County Convention Center

### [1067] Mitochondrial long-chain fatty acid b-oxidation is required for Wnt-mediated increases in bone volume

September 21, 05:15 PM-05:30 PM

W315/Orange County Convention Center

## [1068] Cells targeted by Dmp1-Cre, but not Sost-Cre or CD19-Cre, are a major source of the OPG controlling osteoclast formation in young mice

September 21, 05:30 PM-05:45 PM

W315/Orange County Convention Center

### **Concurrent Orals: Systemic Diseases: Effects on Bone**

September 21, 2019, 04:15 PM

W414/Orange County Convention Center

- Elaine Yu MD, Massachusetts General Hospital, United States, Moderator
- Salvatore Minisola MD, Sapienza, University of Rome, Italy, Moderator

### [1069] Red Cell Distribution Width (RDW), A Widely Available Simple Measure of Cell Aging, Strongly Predicts Hip Fracture

September 21, 04:15 PM-04:30 PM

W414/Orange County Convention Center

### [1070] Anemic Women Have Poorer Cortical Bone Microstructure and Increased Fracture Risk Independent of Bone Mineral Density and Clinical Risk Factors

September 21, 04:30 PM-04:45 PM

W414/Orange County Convention Center

### [1071] The Risk of Hip and Non-Vertebral Fractures in Chronic Kidney Disease: A Systematic Review and Meta-Analysis

September 21, 04:45 PM-05:00 PM

W414/Orange County Convention Center

### [1072] Lumbar Spine Quantitative Computed Tomography (QCT) Is A Better Predictor of Vertebral Fracture in Boys with Duchenne Muscular Dystrophy (DMD) Than either DXA or Peripheral QCT

September 21, 05:00 PM-05:15 PM

W414/Orange County Convention Center

#### [1073] Multiple Sclerosis and Fracture Risk: A Mendelian Randomization Study

September 21, 05:15 PM-05:30 PM

W414/Orange County Convention Center

[1074] Cholinesterase Inhibitor use is Associated with Lower Fracture Risk in Men with Dementia

September 21, 05:30 PM-05:45 PM

W414/Orange County Convention Center

### **Social Event**

September 21, 2019, 08:00 PM Main Event Entertainment/Main Event Entertainment

# Industry Supported Symposium: A Closer Look at X-Linked Hypophosphatemia: Applications for Clinical Practice

September 22, 2019, 06:00 AM W308/Orange County Convention Center Supported by an educational grant from Ultragenyx Pharmaceuticals

#### **Program**

6:00 am

Registration and Breakfast Buffet

6:15 am

Introductions, Disclosures

6.20 am

Clinical Presentation, Pathophysiology, and Complications

6:45 am

Diagnostic Evaluation of XLH

7:10 am

Treatment Strategies: Pharmacologic and Nonpharmacologic Therapies

7:35 am

Closing Comments / Q&A

7:45 am

Adjourn

#### **Faculty**

Aliya Khan, MD, FRCPC, FACP, FACE

Professor of Clinical Medicine Divisions Endocrinology and Geriatrics McMaster University

Bone Research & Education Centre Oakville, Ontario, Canada

Erik Allen Imel, MS, MD

Associate Professor of Medicine and Pediatrics Indiana University School of Medicine

Indiana Center for Musculoskeletal Health Indianapolis, IN

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#### **ASBMR Disclaimer**

This Industry-Supported Symposium will be held in conjunction with the ASBMR 2019 Annual Meeting and is not a part

of the official program of the American Society for Bone and Mineral Research. EXCEL Continuing Education is responsible for the organization and scientific content of this event in accordance with the Essential Areas and Policies of the ACCME as well as with FDA guidelines.

#### **Faculty Disclosure Statement**

EXCEL Continuing Education has a conflict of interest policy that requires course faculty to disclose any real or apparent commercial financial interests related to the content of their presentation/materials. It is not assumed that these financial interests or affiliations will have an adverse impact on faculty presentations; they are simply noted here to fully inform participants.

Dr. Khan has indicated that she has received research grant support from Alexion, Amgen, Ascendis, Radius, Shire, and Takeda.

Dr. Imel's disclosure information will be provided on site.

EXCEL staff and peer reviewer have no relevant information to disclose.

### **Registration Open**

September 22, 2019, 07:00 AM Valencia Ballroom Lobby/Orange County Convention Center

# Plenary Symposium: 50th Anniversary of Bisphosphonates: Back to the Future

September 22, 2019, 08:00 AM

Valencia Ballroom B-D/Orange County Convention Center

- · Richard Eastell MD, University of Sheffield, United Kingdom, Chair
- Jose Luis Millan PhD, Sanford Burnham Prebys Medical Discovery Institute, United States, Chair

#### Other than Anti-resorptive Properties

R Graham Russell MD, PhD, University of Oxford, United Kingdom

September 22, 08:00 AM-08:25 AM

Valencia Ballroom B-D/Orange County Convention Center

#### Impact of Bisphosphonates on Progression and Spread of Malignancy

· Robert Coleman FRCP, MBBS, MD, The University of Sheffield

September 22, 08:25 AM-08:50 AM

Valencia Ballroom B-D/Orange County Convention Center

#### **Zoledronate: A New Geroprotector**

Ilaria Bellantuono MD, PhD, The University of Sheffield

September 22, 08:50 AM-09:15 AM

Valencia Ballroom B-D/Orange County Convention Center

### **Networking Break**

September 22, 2019, 09:15 AM Valencia Foyer/Orange County Convention Center

### **Discovery Hall Open**

September 22, 2019, 09:30 AM West Hall C/Orange County Convention Center

### **Posters Open**

September 22, 2019, 09:30 AM

West Hall C/Orange County Convention Center

All posters will be displayed in the ASBMR Discovery Hall from Saturday, September 21 through Monday, September 23. For a full listing of e-poster, poster and late-breaking poster presentations, please refer to the poster section of the onsite program book.

### **Plenary Orals: Clinical Highlights**

September 22, 2019, 09:45 AM

Valencia Ballroom B-D/Orange County Convention Center

- Bente Langdahl MD, PhD, Aarhus University Hospital, Denmark, Moderator
- Steven Harris MD, University of California, San Francisco, United States, Moderator

[1075] A Randomized Clinical Trial on the Effect of Dietary Calcium Intake as Compared to Calcium Supplement on Vascular Health in Postmenopausal Women

September 22, 09:45 AM-10:00 AM

Valencia Ballroom B-D/Orange County Convention Center

[1076] Effects of Supplementation with Vitamin D3 400, 4000 or 10000 IU Daily for Three Years on Vascular Calcification in The Calgary Vitamin D Study: Secondary Analysis of a Randomized Controlled Trial

September 22, 10:00 AM-10:15 AM

Valencia Ballroom B-D/Orange County Convention Center

[1077] Long-term Safety and Improvement in Clinical Outcomes in the Phase 3 Randomized, Double-Blind, Placebo-Controlled Study of Burosumab, an Anti-FGF23 Antibody, in Adults with X-Linked Hypophosphatemia (XLH)

September 22, 10:15 AM-10:30 AM

Valencia Ballroom B-D/Orange County Convention Center

[1078] Identification and Validation of Targets for Osteoporosis: Evidence from Whole exome Sequencing in 42,263 individuals, CRISPR-Cas9 and murine models

September 22, 10:30 AM-10:45 AM

Valencia Ballroom B-D/Orange County Convention Center

[1079] The Burden of Osteoporosis in the United States - A US Bone and Joint Initiative Report

September 22, 10:45 AM-11:00 AM

Valencia Ballroom B-D/Orange County Convention Center

### Plenary Orals: Musculoskeletal Aging

September 22, 2019, 09:45 AM

Valencia Ballroom A/Orange County Convention Center

Hyun-Mo Ryoo DDS, PhD, Seoul National University School of Dentistry, Republic of Korea, Moderator

[1080] An Antibody against Oxidized Phospholipids Prevents Age Related Bone Loss and Improves Glucose Metabolism in Mice

September 22, 09:45 AM-10:00 AM

Valencia Ballroom A/Orange County Convention Center

[1081] Deletion of the Mitochondrial Deacetylase Sirt3 Suppresses Osteoclast Fusion and Increases Bone Mass in Old Mice

September 22, 10:00 AM-10:15 AM

Valencia Ballroom A/Orange County Convention Center

[1082] Old mice attenuate compression-induced intervertebral disc degeneration by suppressing Serpina1 via Wnt signaling

September 22, 10:15 AM-10:30 AM

Valencia Ballroom A/Orange County Convention Center

[1083] Immune Evasion, Apoptosis Resistance and Cellular Senescence in Tendon Aging and Pathology

September 22, 10:30 AM-10:45 AM

Valencia Ballroom A/Orange County Convention Center

[1084] TRAF3 degradation in mesenchymal stem cells during aging promotes accumulation of RANKL- and TGFβ-expressing immune cells in bone marrow and causes bone loss

September 22, 10:45 AM-11:00 AM

Valencia Ballroom A/Orange County Convention Center

# Challenge-the-Expert - Parathyroid Disease and Other Disorders of Mineral Metabolism

September 22, 2019, 11:00 AM

W414/Orange County Convention Center

· Dolores Shoback MD, VA Medical Center, United States, Chair

#### Panelist #1

• Michael Mannstadt MD, Massachusetts General Hospital Harvard Medical School, United States

September 22, 11:00 AM-12:00 PM

W414/Orange County Convention Center

#### Panelist #3

· Mishaela Rubin MD, Columbia University, United States

September 22, 11:00 AM-12:00 PM

W414/Orange County Convention Center

#### Panelist #2

• Ghada El-Hajj Fuleihan MD, MPH, American University of Beirut-Medical Center, Lebanon

September 22, 11:00 AM-12:00 PM

W414/Orange County Convention Center

### **Cutting Edge Concepts: Stem Cells in the Skeleton**

September 22, 2019, 11:00 AM

W315/Orange County Convention Center

- · Geert Carmeliet MD, PhD, KU Leuven, Belgium, Chair
- Kurt Hankenson DVM, PhD, University of Michigan, United States, Chair

#### Periosteal Stem Cells in Skeletal Regeneration

Celine Colnot PhD, INSERM, France

September 22, 11:00 AM-11:30 AM

W315/Orange County Convention Center

#### **Skeletal Stem Cells**

· Charles Chan PhD, Stanford University

September 22, 11:30 AM-12:00 PM

W315/Orange County Convention Center

### Meet the Professor: Bone Loss Associated with Dismobility

September 22, 2019, 11:00 AM

W311 C/Orange County Convention Center

#### **Bone Loss Associated with Dismobility**

• Yumie Rhee MD, PhD, Yonsei University College of Medicine, Republic of Korea

September 22, 11:00 AM-12:00 PM W311 C/Orange County Convention Center

### Meet the Professor: Effects of OA on Subchondral Bone

September 22, 2019, 11:00 AM W311 D/Orange County Convention Center

#### **Effects of OA on Subchondral Bone**

 Tamara Alliston PhD, University of California, San Francisco, United States September 22, 11:00 AM-12:00 PM
 W311 D/Orange County Convention Center

# Meet the Professor: How Can Your DXA System Detect Incomplete AFF?

September 22, 2019, 11:00 AM W311 F/Orange County Convention Center

#### **How Can Your DXA System Detect Incomplete AFF?**

 Malachi McKenna MD, St. Vincent's University Hospital, Ireland September 22, 11:00 AM-12:00 PM
 W311 F/Orange County Convention Center

# Meet the Professor: How to Manage Diabetics at High Risk of Fracture

September 22, 2019, 11:00 AM W311 B/Orange County Convention Center

#### How to Manage Diabetics at High Risk of Fracture

 William Leslie MD, University of Manitoba, Canada September 22, 11:00 AM-12:00 PM
 W311 B/Orange County Convention Center

# Meet the Professor: Recurrent Fractures in Children and Adolescents: Assessment & Management

September 22, 2019, 11:00 AM W311 H/Orange County Convention Center

#### Recurrent Fractures in Children and Adolescents: Assessment & Management

 Leanne Ward MD, Children s Hospital of Eastern Ontario, Canada September 22, 11:00 AM-12:00 PM
 W311 H/Orange County Convention Center

# Meet the Professor: Sequential Drug Therapy for Osteoporosis (Repeat)

September 22, 2019, 11:00 AM W312 AB/Orange County Convention Center

#### **Sequential Drug Therapy for Osteoporosis (Repeat)**

• Felicia Cosman MD, Columbia University College of Physicians and Surgeons, United States

September 22, 11:00 AM-12:00 PM W312 AB/Orange County Convention Center

# Meet the Professor: Skeletal Actions of Calcium Sensing Receptor and Its Pharmaceutical Potential

September 22, 2019, 11:00 AM

W311 E/Orange County Convention Center

#### Skeletal Actions of Calcium Sensing Receptor and Its Pharmaceutical Potential

 Wenhan Chang PhD, Endocrine Unit, VA Medical Center, University of California, San Francisco, United States September 22, 11:00 AM-12:00 PM

W311 E/Orange County Convention Center

### Meet the Professor: Targeting Drugs to the Bone

September 22, 2019, 11:00 AM

W311 A/Orange County Convention Center

#### **Targeting Drugs to the Bone**

- Frank Ebetino PhD, University of Rochester, United States
- R Graham Russell MD, PhD, University of Oxford, United Kingdom

September 22, 11:00 AM-12:00 PM

W311 A/Orange County Convention Center

# Meet the Professor: Treatment to Prevent Fracture in Postmenopausal Women with Osteopenia (Repeat)

September 22, 2019, 11:00 AM

W312 C/Orange County Convention Center

#### Treatment to Prevent Fracture in Postmenopausal Women with Osteopenia (Repeat)

· Richard Eastell MD, University of Sheffield, United Kingdom

September 22, 11:00 AM-12:00 PM

W312 C/Orange County Convention Center

### National Institutes of Health Pathways to Prevention Workshop: Research Gaps for Long-Term Drug Therapies for Osteoporotic Fracture Prevention

September 22, 2019, 11:00 AM

W314/Orange County Convention Center

- FAYE CHEN PhD, NIH/NIAMS, Chair
- LYNDON JOSEPH, NATIONAL INSTITUTES OF HEALTH, Chair

#### The NIH Pathways to Prevention Program

• Keisha Shropshire MPH, NIH Office of Disease Prevention (ODP), United States

September 22, 11:00 AM-11:05 AM

W314/Orange County Convention Center

#### Current State of Science on Drug Therapies for Osteoporotic Fracture Prevention

Sundeep Khosla MD, Mayo Clinic College of Medicine, United States

September 22, 11:05 AM-11:10 AM

W314/Orange County Convention Center

#### Report on Systematic Evidence Review for the P2P Workshop

Howard Fink MD, MPH, GRECC, Minneapolis VA Medical Center, United States

September 22, 11:10 AM-11:20 AM

W314/Orange County Convention Center

#### Workshop Panel Report on Evidence Gaps and Research Opportunities

• Carolyn Crandall MD, MS, University of California, Los Angeles, United States

September 22, 11:20 AM-11:30 AM

W314/Orange County Convention Center

#### NIH Activities Following the P2P Workshop

Faye Chen PhD, NIH/NIAMS

September 22, 11:30 AM-11:35 AM

W314/Orange County Convention Center

#### **ASBMR Perspective**

- Benjamin Leder MD, Massachusetts General Hospital Harvard Medical School, United States
- Douglas Kiel MD, MPH, Hinda and Arthur Marcus Institute for Aging Research Hebrew SeniorLife, United States September 22, 11:35 AM-11:50 AM

W314/Orange County Convention Center

#### **Discussion**

September 22, 11:50 AM-12:00 PM

W314/Orange County Convention Center

### **Networking Break**

September 22, 2019, 12:00 PM

West Hall C/Orange County Convention Center

### Late-Breaking Posters II

September 22, 2019, 12:30 PM

West Hall C/Orange County Convention Center

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# [LB SUN-972] An Evaluation of the Pharmacodynamic Effects of an Oral hPTH(1-34) formulation in Patients with Hypoparathyroidism

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

### [LB SUN-977] Micro-compression properties of OI bone are not inferior to healthy controls in fixed iliac crest biopsies

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

### [LB SUN-978] Bone Adaptation to Load is controlled by Local Mechanical Signals with Net Bone Changes Logarithmically Dependent on Loading Frequency

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

### [LB SUN-982] Idiopathic Infantile Hypercalcemia- Biochemical and Genetic Studies in Patients with Mild Phenotype

September 22, 12:30 PM-02:30 PM

#### [LB SUN-987] Is Important the Muscle Health in the Clinical Assessment of Risk of Osteoporotic Fractures?

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

#### [LB SUN-988] Developing an in vitro model of CKD-MBD induced αKlotho suppression

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

# [LB SUN-992] The Effects of Interleukin-1 Receptor Antagonism on Bone Healing and Formation in the Femoral Diaphysis of Young male Fischer-344 Rats.

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

### [LB SUN-994] Distinct Tumor Microenvironments of Lytic and Blastic Bone Metastases in Prostate Cancer Patients

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

#### [LB SUN-997] Targeting GPCR GRK2 Signalling as a Novel Modulator of Osteoarthritis

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

### [LB SUN-1001] Postsurgical Hypoparathyroidism and Hungry Bone Syndrome after Total Parathyroidectomy for Renal Hyperparathyroidism in a Patient with Possible Nail Patella Syndrome

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

# [LB SUN-1003] Plasma Sclerostin is Associated with Visceral Adipose Tissue but not Subcutaneous Adipose Tissue in Men and Women in the Framingham Study

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

### [LB SUN-1005] MicroRNA-1915-3P in serum exosome is associated with disease activity of rheumatoid arthritis in Korea

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

# [LB SUN-1009] Impaired pericellular matrix production and selection for enhanced cell membrane repair with aging may impair responses to mechanical loading in the aging skeleton

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

### [LB SUN-1012] Calcitriol Elevation is Associated with a Higher Risk of Refractory Hypercalcemia of Malignancy in Solid Tumor

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

### [LB SUN-1014] A density-based method to separate young and senescent cells from cultured bone marrow stromal cells

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

### [LB SUN-1018] Gremlin 1 positive skeletal stem cells play significant role in the skeleton formation and articular cartilage maintenance.

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

### [LB SUN-1019] Diverse mesenchymal stem cell populations contribute to VEGFA expression in post-traumatic heterotopic ossification.

September 22, 12:30 PM-02:30 PM

#### [LB SUN-1025] Mast Cells Supernatant Inhibit Bone Formation Markers Gene Expression in SHR Osteoblasts

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

#### [LB SUN-1029] Origin and Functions of Osteoclasts and Macrophages in Inflammatory Arthritis

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

### [LB SUN-1030] Elevated levels of pro-inflammatory cytokines are required for anti-resorptive agent-related osteonecrosis of the Jaw development in mice

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

### [LB SUN-1031] PARP1 hinders H2B occupancy at the NFATc1 promoter to restrain the differentiation of macrophages into osteoclasts

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

### [LB SUN-1036] Osteocyte-specific genes and signaling networks regulated by the large G alpha-subunit XL $\!\alpha s$

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

### [LB SUN-1037] Sex and Age Dependent Effects of Dmp1-Cre Mediated Deletion of Nfatc1 on Bone and Skeletal Muscle

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

### [LB SUN-1038] Individuals afflicted with Type 2 Diabetes Mellitus show lower femoral endocortical Sclerostin expression along with higher fluorescent advanced glycation endproducts

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

# [LB SUN-1044] Age- and Sex-Related Spatial Differences in vBMD using HR-pQCT and voxel-based morphometry (VBM)

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

### [LB SUN-1045] Fragility Fractures are a Consequence of Microstructural Deterioration Captured by Estimated Failure Load, not Bone Mineral Density

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

### [LB SUN-1046] Low Trabecular Bone Score with or without osteoporosis is differentially linked to distinct clinical conditions.

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

### [LB SUN-1047] Concordant osteopenia have similar FRAX assessed fracture risk with discordant osteoporosis in postmenopausal women

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

# [LB SUN-1053] Impact of Disease Definition, Frailty Status and Functional Impairments on Hip Fracture and Mortality Incidence Among Late-Life Women

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

### [LB SUN-1054] Ethnic differences in prevalent fractures and bone mineral density: the Canadian Longitudinal Study of Aging

September 22, 12:30 PM-02:30 PM

#### [LB SUN-1064] Dairy Supplementation in Institutionalized Older Adults: a 2-Year Cluster Randomized Study

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

### [LB SUN-1065] Development of VDDQ-J (Vitamin D Deficiency Questionnaire for Japanese): A Novel Screening Tool for Vitamin D Deficiency for Japanese

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

# [LB SUN-1071] Long-term effects of calcium supplementation on high-sensitivity cardiac troponin I in older women: analysis of samples from a 5-year double-blind randomized controlled trial

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

#### [LB SUN-1072] Tool for estimating risk of Atypical Femur Fractures

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

### [LB SUN-1075] Synthetic Nanofibrous Microenvironments Modulate Osteoclast Activity and are a Promising Tool Towards Guiding Secretome-Mediated Bone Regeneration

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

#### [LB SUN-1078] The Role of Leukotrienes on Cartilage Proteomic Profiling in Rheumatoid Arthritis In Vivo

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

### [LB SUN-1081] Mass Cytometry Reveals Rare Bone Marrow Stromal Cell Populations Targeted by Abaloparatide and Teriparatide

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

### [LB SUN-1083] De novo missense mutation in SP7 in a patient with cranial hyperostosis, long bone fragility, and increased osteoblast number

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

# [LB SUN-1086] A clinical update on BLU-782, an investigational selective ALK2 inhibitor in development for fibrodysplasia ossificans progressiva (FOP)

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

### **Poster Session II**

September 22, 2019, 12:30 PM

West Hall C/Orange County Convention Center

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### [SUN-9] Neurogenic heterotopic ossification in post intensive care rehabilitation unit: a matter of degree?

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

### [SUN-10] Establishment of Biomarkers for Antiresorptives-related Osteonecrosis of the Jaw: In vivo and preliminary clinical results

September 22, 12:30 PM-02:30 PM

### [SUN-11] The utility of SRS/SRPET and systemic FGF23 venous sampling for tumor localization in 20 consecutive tumor-induced osteomalacia cases

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

#### [SUN-12] Vitamin D and Acute Respiratory Infections - The PODA Trial

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

#### [SUN-13] Gestational hypercalcemia: Prevalence and biochemical profile

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

# [SUN-14] Effect of obesity on bone microstructure and strength following parathyroidectomy in primary hyperparathyroidism.

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

### [SUN-15] Fourier Transform Infrared Spectroscopy in the Examination of Renal Osteodystrophy and Kidney Transplantation

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

#### [SUN-40] Strontium treatment has synergistic effects with PTH as evaluated in OVX rats

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

### [SUN-41] Statistical shape modeling of the fractured and non-fractured scaphoid bone based on HR-pQCT images

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

#### [SUN-42] Bone Quality In Postmenopausal Women With Severe Osteoporosis

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

# [SUN-43] Cortical Bone Mechanics Technology Detects Collagen-Mediated Degradation of Cadaveric Human Ulna Bending Stiffness

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

#### [SUN-44] Short Duration of Type 1 Diabetes Does Not Alter Material Properties in Juvenile Mice

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

### [SUN-45] Superior Detection of Scaphoid Fractures with High Resolution peripheral Quantitative Computed Tomography Compared to Conventional CT

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

### [SUN-46] Combination Therapy of Teriparatide and Anti-RANKL Monoclonal Antibody Increases Bone Mass and Promotes Bone Regeneration of Glucocorticoid-Induced Osteoporosis in Mice.

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

#### [SUN-47] Tibial macro- and microstructure adaptations to prolonged arduous military training in women

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

#### [SUN-48] Exploration of functional co-variation within the human rib

September 22, 12:30 PM-02:30 PM

#### [SUN-49] Acoustically stimulated electric polarization in osteoporotic bone

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

### [SUN-50] The missense mutations p.Met16Leu, p.Ala41Thr, p.Tyr74Phe and p.Arg120Leu in DKK1 affect its inhibitory capacity

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

### [SUN-51] Sex-Specific Difference in Local Regions of Bone Microstructure Best Predict Strength in the Proximal Femur

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

### [SUN-52] Non-invasive near infrared spectroscopic method for bone quality assessment in osteogenesis imperfecta

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

### [SUN-53] A Col1a2 Mutation Reveals Bone Fragility, Hyperelasticity of Skin and Degeneration of Articular Cartilage in Mice

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

### [SUN-54] Evaluation of the Influence of Variation in Mineralized Collagen Fibril Orientation between Lamellae on Mechanical Behavior of Bone Using Multiscale Finite Element Modeling

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

# [SUN-55] Effect of tissue heterogeneity on micromechanics of the trabecular bone as examined by in vivo microCT-based DVC and FEA

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

#### [SUN-56] Precision of Bone Strength Estimation using HR-pQCT-Based Homogenized Finite Element Analysis

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

#### [SUN-77] Heterozygous Mutation in WNT1 gene in Brothers with Early- Onset Osteoporosis

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

#### [SUN-78] Bone Density in Children and Young Adults with Type 2 Diabetes

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

#### [SUN-79] Adult height of patients with achondroplasia treated with growth hormone

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

#### [SUN-80] Determining Bone Parameter Percentile Curves for Japanese Adolescents

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

#### [SUN-98] Correction of muscle dysfunction by osteocalcin in sarcopenia

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

#### [SUN-99] RANKL is a novel regulator of male fertility

September 22, 12:30 PM-02:30 PM

### [SUN-100] Osteocytic peri-lacunar remodeling and angiogenesis in lactating mice treated with osteoprotegerin (OPG)

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

#### [SUN-101] Lack of osteocytic-miR21 promotes skeletal muscle mass growth in a sex-specific manner

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

#### [SUN-102] Prx1Cre is expressed early in brain development and in adult brain.

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

#### [SUN-103] Total bioactive VEGF-A ELISA – a high sensitivity immunoassay

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

#### [SUN-104] Zoledronic acid improves muscle function in mice treated with chemotherapy

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

#### [SUN-105] The role of Fam20C on the tooth dentin formation

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

### [SUN-106] Bowel Inflammation Measured by [18F] FDG Correlates with Hip and Spine CT Data in Healthy Subjects

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

#### [SUN-107] Opioids Paradoxically Exacerbate Fracture Pain Despite Evidence of Bone Union

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

### [SUN-108] Heat-killed Lactobacillus reuteri Can Decrease Alveolar Bone Resorption On Induced Periodontitis In Rats

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

#### [SUN-109] Modulators of Fam210a and effects of Fam210a on myoblastic differentiation and degradation

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

# [SUN-110] Elucidating the crosstalk among IncRNAs, microRNAs and mRNAs in the bone metabolism related genes associated with Coronary Vascular Calcification in elderly women cohort of the São Paulo Aging and Health Study

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

#### [SUN-128] Mechanosensitivity of Suspension Cells and Its Potential Clinical Implication for Bioprocessing

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

# [SUN-129] Pretreatment with the antidiabetic drug metformin alters the bone microenvironment to increase myeloma tumour burden and bone disease in vivo

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

# [SUN-130] Purified Human Bone Marrow Stromal Cells Co-Expressing CD146, CD271, and LEPR Show In Vivo Trilineage Differentiation Characteristic of Skeletal Stem Cells

September 22, 12:30 PM-02:30 PM

#### [SUN-131] Specificity of Osteal Macrophage Efferocytosis

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

### [SUN-148] Integrin β6 upregulation by the Prostate Tumor-secreted Protein Mindin is Associated with Increased Adhesion of Cancer Cells to the Bone Microenvironment

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

### [SUN-149] Cholesterol promotes myeloma cell viability and increases bone marrow myeloma tumour burden in vivo

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

#### [SUN-150] Investigating the Role of ATRX in Osteosarcoma Progression

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

#### [SUN-151] Artificial Intelligence (AI) Can Detect Bone Marrow Lesions (BMLs) on Plain Radiographs

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

#### [SUN-152] Characterization of TIE2 Function in Cancer Cell Dormancy and Bone Metastases

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

#### [SUN-153] Understanding the action of RARy agonists on human osteochondroma explants.

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

#### [SUN-154] Prostate cancer bone metastasis model for preclinical evaluation of radiopharmaceuticals

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

#### [SUN-155] Factors Released from Highly Bone-metastatic Cancer Cells Play a Critical Role in Osteolysis

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

### [SUN-156] Runx2 Mediated Microtubule Stabilization Promotes Autophagy in Bone Metastatic Breast Cancer Cells

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

### [SUN-157] Bone matrix miR-125b suppresses the progression of osteolytic bone metastasis by targeting not only osteoclasts but also cancer cells

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

#### [SUN-158] Determining the impact of mechanical loading on the arrival of prostate cancer in bone

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

### [SUN-159] The bone microenvironment drives up-regulation of the pentose phosphate pathway in prostate cancer, promoting a pro-antioxidant environment and regulating tumour growth and chemosensitivity.

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

#### [SUN-160] Tetrahedron DNA nanostructure, a novel drug vehicle for tumor therapy.

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

# [SUN-183] Inflammation-Induced Metabolic Reprogramming in Chondrocytes is a Therapeutic Target in Joint Disease

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

# [SUN-184] Hyperactivation of IL36 $\alpha$ signaling induces OA-like phenotype, pain and upregulated pain-associated gene expression in DRG

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

#### [SUN-185] Inhibition of Osteoarthritis Progression by Blocking Connexin Channels

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

### [SUN-186] Neuropeptide Y Acts Directly in the Periphery on Cartilage Homeostasis and Exacerbates Progression of Osteoarthritis through NPY2R

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

### [SUN-187] Conditional Disruption of TCF7L2 in Chondrocytes Produces Contrasting Effects on Cortical and Trabecular Bone Phenotypes in Mice

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

# [SUN-188] P2Y Purinoceptor 2 Positively Regulates Cyclic Tension Strain-induced ECM Anabolism In Chondrogenic Cells

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

# [SUN-189] Detection of knee stress prior to the onset of overt articular cartilage damage using fluorescence-based cryohistology of non-decalcified tissue sections.

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

### [SUN-190] Fibrocartilage Stem Cells derived from Human Condylar Surface Revealed Distinct Chondrogenic Capacity Regulated by SOX9.

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

### [SUN-209] A Possible Case of Larsen Syndrome in a Young Man with Severe Kyphoscoliosis, Reduced Bone Mass and Valvular Heart Disease

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

### [SUN-210] Successful Bisphosphonate Therapy for Vertebral Avascular Necrosis in an Adolescent with Sickle Cell Disease

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

#### [SUN-211] The first case of genetically confirmed adult hypophosphatasia in Korean population

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

#### [SUN-212] Variability of Bone Disease in HIV Patients: A Case Series

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

#### [SUN-213] Use of Zoledronic Acid for management of Sclerosing Osteomyelitis of the Mandible

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

#### [SUN-214] Diagnosis of Genetic Odontohypophosphatasia in an Adult

September 22, 12:30 PM-02:30 PM

### [SUN-215] Clinical Case of low calcium intake combined with pregnancy and lactation leads to low bone mineral density and fracture.

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

### [SUN-216] Persistent elevation of markers of bone resorption in a patient who developed multiple spontaneous vertebral fractures two months after a missed dose of Denosumab

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

#### [SUN-217] Scurvy: A Largely Forgotten, Yet Still Relevant Cause of Musculoskeletal Disease in Children

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

#### [SUN-218] Severe Hypercalcemia as Manifestation of Large Granular Lymphocytic Leukemia

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

#### [SUN-225] O-glycosylation a Novel Post-Translational Modification of Osteocalcin Increases its Half-life In Vivo

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

### [SUN-226] Sympathetic inhibition prevents but high fat, high protein diet causes bone loss during cold exposure in young C57BL/6J mice

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

### [SUN-227] Measurement of Uncarboxylated Osteocalcin in Humans Using a Novel Immunoassay Reveals Association with Insulin Sensitivity and Diabetes

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

### [SUN-228] KLF10 is a novel regulator of TCA cycle metabolism and mediates skeletal muscle cell differentiation and function.

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

## [SUN-229] Longitudinal Study of Obesity Effect on Bone and Marrow Adipose Tissue (MAT) in Skeletally-Mature Mice

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

### [SUN-243] Genome-Wide Association Study Reveals Meteorin-like as a Novel Regulator of Whole Bone Strength

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

### [SUN-244] Identifying pleotropic SNPs associated with femoral neck BMD and heel BMD estimated by quantitative ultrasound

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

### [SUN-245] Metabolites Associated with Bone Mineral Density in Chinese Women during Menopause Transition and Beyond

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

#### [SUN-246] A Biorepository for Genomic Inquiry within the Shriners Hospitals for Children

September 22, 12:30 PM-02:30 PM

#### [SUN-247] Genetic Risk Scores to Improve Osteoporosis Screening: Validation in External Cohorts

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

### [SUN-248] New insights into the multiorgan alterations caused in mice by the ADO2 CLCN7G213R mutation: an unbiased transcriptome approach

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

### [SUN-249] Prediction of bone mineral density by using various genetic profiling: A comparative analysis in independent samples

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

#### [SUN-267] Delta Like 1(DLK1) is a Possible Mediator of Vitamin D Effects on Bone and Energy Metabolism

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

# [SUN-268] Voluntary Wheel Running Partially Compensates for the Effects of Global Estrogen Receptor-α Knockout on Cortical Bone in Young Male Mice

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

### [SUN-269] The effects of estradiol are modulated in a tissue-specific manner in mice with inducible inactivation of ERα after sexual maturation

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

### [SUN-270] Antimicrobial CAMP/LL-37 is Upregulated by Vitamin D Metabolites in Human Mesenchymal Stromal/Stem Cells

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

# [SUN-271] A Pilot Study of $\alpha$ -KLOTHO Serum Concentrations in CKD Patients using a Highly Sensitive Fluorescence Immunoassay based on Plasmonic Microtiter Plates

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

### [SUN-272] Nutrigenomics of 1,25(OH)2D3 Action in the Intestine: Evidence for a Role of 1,25(OH)2D3 in Manganese Transport

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

### [SUN-273] Role of MEK1/2 and MEK5 in melatonin-mediated osteoblastogenesis and osteoclastogenesis and bone formation in vitro and in a Balb(c) calvarial defect model.

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

# [SUN-274] The Polycomb Protein Bmi1 Plays a Crucial Role in the Prevention of 1,25(OH)2D Deficiency-induced Osteoporosis

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

#### [SUN-275] SOMATOPAUSE-DRIVEN SENILE OSTEOPOROSIS

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

#### [SUN-293] Circadian rhythm effect on load-induced bone formation and gene expression in mice

September 22, 12:30 PM-02:30 PM

### [SUN-294] Irisin Treatment Prevents dysregulation of Osteoblast Differentiation and Activity in 3D in vitro bone cocultures exposed to microgravity during the space flight CRS-14 mission

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

#### [SUN-295] Hypergravity and microgravity oppositely controlled the bone and muscle mass in mice

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

#### [SUN-296] Osteocyte Wnt/β-catenin pathway activation upon Mechanical loading is Altered in OVX Mice

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

### [SUN-297] Pulsating Fluid Flow Modulates Bone Cell and Nucleus Morphology - Implications for Bone Cell Function?

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

#### [SUN-298] Piezo1 Channel Activation in Osteoblastic Cells under Low-intensity Pulsed Ultrasound Stimulation

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

### [SUN-299] A bispecific soluble receptor fusion protein targeting TNF- $\alpha$ and IL-21 attenuates rheumatoid arthritis

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

### [SUN-300] Promoting bone formation in Marfan Syndrome through in vivo mechanical loading and sclerostin neutralizing antibody treatment

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

#### [SUN-319] Effect of vitamin D supplementation on bone resorption in patients with type 2 diabetes

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

#### [SUN-320] Calcium sensing receptor in male germ cells is essential for processes leading to fertilization

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

#### [SUN-321] Factors Affecting Bone-Metabolism Markers in Female High-School Students

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

#### [SUN-322] Regulation of α-klotho Expression by Dietary Phosphate During Growth Periods

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

### [SUN-323] Lycopene Protects Against Glucocorticoid-Induced Osteoporosis In Mice: Impact On Oxidative Stress And Osteocyte Senescence

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

### [SUN-324] Etelcalcetide decreases PTH-calcium set point without changing maximum and minimum PTH secretion in vivo in mice model of primary hyperparathyroidism

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

### [SUN-325] Establishment of model mice of FGF23-related hypophosphatemia induced by iron solution administration.

September 22, 12:30 PM-02:30 PM

#### [SUN-326] TXNIP participates in GIO bone loss through mitochondrial oxidative phosphorylation pathway

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

### [SUN-327] Regulation of cyclophilin D and mitochondrial permeability transition pore during osteogenic differentiation

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

#### [SUN-342] PAI-1 accelerates sarcopenia and ageing-related osteoporosis.

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

#### [SUN-343] Monomethylfumarate Protects against Ovariectomy-related Changes in Body Composition

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

### [SUN-344] A timed up and go test predicts fracture risk in older women independently of clinical risk factors and bone mineral density

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

### [SUN-345] Is low impact physical activity associated with lower limb bone and muscle outcomes? Results from the Hertfordshire Cohort Study

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

#### [SUN-346] Postnatal Runx2 deletion causes age-related changes in bone.

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

# [SUN-363] Gene by environment interactions govern the existence and magnitude of bone response to inhaled air pollution

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

#### [SUN-364] BMD development after the attainment of peak bone mass: A longitudinal study

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

# [SUN-365] Deletion of PhIpp1 in Chondrocytes Enhances Proliferation by Increasing Expression of the PTH Receptor

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

### [SUN-366] Discoidin domain receptor 1 regulates endochondral ossification through terminal differentiation and apoptosis of chondrocytes

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

### [SUN-367] QTL for Femoral Trabecular Bone Mass and Microarchitecture and Their Dietary Responses to Calcium Restriction in Male BXD Recombinant Inbred Mouse Strains

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

### [SUN-368] Genome-wide Association Study Identifies One Novel Locus Associated With Thickness And Mineralization Of Pediatric Metacarpal Bones

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

### [SUN-369] Harnessing the Osteo-inductive Property of JAGGED1 as a Maxillary Bone Regenerative Intervention

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

### [SUN-370] Analysis of Linear Regression between Morphometric Parameters of Growth Plate and Long Bone Growth in Mice and Human

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

#### [SUN-371] Local Intraoperative Steroid Administration Does Not Impact Spinal Fusion Outcomes in Rats

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

### [SUN-372] Osteoblast-specific reduction in DYRK1A copy number alters bone growth in a Down syndrome mouse model

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

#### [SUN-373] Characterizing the Effects of Methylphenidate Dosage and Dosing Regimen on Bone Integrity

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

#### [SUN-374] Regional difference in microRNA regulation in the skull vault

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

#### [SUN-397] Low PLS3 Expression Impairs Osteoblast Differentiation of Pediatric MSCs in vitro

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

#### [SUN-398] Smurf1 negatively regulates odontoblast differentiation

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

# [SUN-399] The Transcription Factor EBF1 is required for GR-Mediated Adipogenesis from Bone Marrow Progenitors

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

#### [SUN-400] Scara5 prevents osteoblast differentiation in favor of adipocytes.

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

#### [SUN-401] Evidence for Lgr6 as a Novel Marker of Osteoblastic Progenitors in Mice

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

# [SUN-402] PRESERVED CAPACITY FOR IN VIVO BONE FORMATION BY MESENCHYMAL STEM CELLS FROM OSTEOPOROTIC PATIENTS

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

### [SUN-403] Adult periosteum preserves a skeletal stem cell subset that requires distinct CCL5-dependent migration for bone regeneration and repair

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

#### [SUN-404] Defining Hox11 Function in MSCs During Adult Skeletal Homeostasis and Injury Repair

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

### [SUN-405] Is LBX1 Playing a Role in the Differentiated Paraspinal Muscle Phenotypes and Muscle-bone Interaction in Adolescent Idiopathic Scoliosis (AIS)

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

### [SUN-406] Physiological occlusal force regulates periodontium mesenchymal stem cells activation by modulating Wnt inhibitor level within the niche

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

### [SUN-425] Core binding factor $\beta$ protects osteoarthritis progression by inhibiting proteosomal degradation of Runx1

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

# [SUN-426] Vitamin B complex and Lactobacillus Acidophilus LA-1 attenuate pain response and cartilage damage in monosodium iodoacetate-induced osteoarthritis by inhibiting STAT3 signaling

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

# [SUN-427] Meaningful Effectiveness of Platelet-Rich Plasma (PRP) in Treating Patients with Osteoarthritis of the Knee: Meta-analysis and Review

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

#### [SUN-428] p21 deficiency is susceptible to TMJ-Osteoarthritis with mechanical stress

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

### [SUN-429] LPS Induced Inflammation Prior to Anterior Cruciate Ligament (ACL) Injury Increases the Severity of Post-Traumatic Osteoarthritis in C57BI/6J Mice

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

### [SUN-430] Analysis of bone erosions of the MCP joint using High Resolution peripheral Quantitative CT (HR-pQCT): an investigation of false-positive erosions

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

# [SUN-431] Effect of Alendronate Treatment on the Load Response of the Mandibular Cartilage in Osteogenesis Imperfecta Mice

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

### [SUN-432] Oral Gene Therapy of Post-traumatic Osteoarthritis with Gut Macrophage-targeted Delivery of IL-1β shRNA via Recombinant Sacchromyces Cerevisiae

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

#### [SUN-462] The FIAT transcriptional repressor as a drug target for bone regeneration

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

#### [SUN-463] Effect of nanostructured titanium on osteoblast-osteoclast crosstalk

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

#### [SUN-464] pH Transport Driven Matrix Synthesis During Bone Formation

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

#### [SUN-465] DIx5 and DIx6 promote final osteoblast differentiation and the maintenance of cortical bone

September 22, 12:30 PM-02:30 PM

### [SUN-466] BAF45A subunit of the mammalian BAF complex directs tooth specific chromatin remodeling essential for mineralized tissue

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

#### [SUN-467] Exendin-4 enhances the differentiation of MC3T3-E1 osteoblasts via regulation of connexin43

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

#### [SUN-468] Ezh2 inhibition primes BMP2-mediated osteogenic differentiation and bone healing

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

#### [SUN-469] Critical Role of IGF1 Signaling in Regulating CXCL12 Expression in Fracture Repair

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

# [SUN-470] Genome-wide dynamics of transcription factor binding and epigenomic programming in mesenchymal stromal cells during osteoblastic differentiation

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

#### [SUN-471] Col1a1-Cre targets the ovary and testis.

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

#### [SUN-472] Reactivation of bone lining cells is modestly attenuated but reproducible during persistent antisclerostin antibody administration

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

#### [SUN-473] Characterization of the Consequences of Loss of DAAM2 in Human Osteoblasts

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

#### [SUN-474] Noncanonical autophagy at ER exit sites in osteoblasts

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

#### [SUN-475] Research on Semaphorin4D in Periodontal Tissues of Experimental Rat Periodontitis

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

#### [SUN-476] Deciphering phosphate signaling cascade in osteogenic cells

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

# [SUN-477] Stimulatory effects of MTF-2, a flavone compound, on odontoblast differentiation of human dental pulp stem cells via upregulating p38 pathway and elongation of tooth root.

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

#### [SUN-478] Development of In Vitro Bone Surface Models on Demineralized Compact Bone Slices

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

#### [SUN-479] Histone Demethylase LSD1 Regulates Osteoblast Differentiation in vitro and in vivo

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

# [SUN-481] Betaine alleviates alcohol-inducedosteonecrosis of femoral head via regulation of PI3K/AKT/mTORpathway

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

#### [SUN-482] Osteoblast-specific expression of Panx3 is dispensable for postnatal bone remodeling

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

# [SUN-522] Osteoclast Precursor Assessment In Rheumatoid Arthritis: The In Vitro Osteoclast Differentiation in Arthritis (IODA) study

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

### [SUN-523] Mature Murine Osteoclasts Respond Rapidly to Low Extracellular Sodium with GTP-ase Activation and Increased Bone Resorption

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

#### [SUN-524] LPlastin deficiency reduced sealing ring formation and bone resorption in osteoclasts in vitro

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

#### [SUN-525] GPR109A regulates osteoclastogenesis and bone resorption in mice

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

### [SUN-526] The Effect of ZBTB20 on NF-kB/IRF-3 Signaling Pathway in Aseptic Loosening Caused by Wear-

#### Particle-Induced Osteolysis

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

#### [SUN-527] Perturbation of osteoclasts in utero affects mouse mandibular morphology

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

#### [SUN-528] Humanin suppresses RANKL-induced osteoclast differentiation through AMPK activation

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

#### [SUN-529] Enhanced osteoclast bone-resorbing activity in vitro by stabilin-1 deficiency

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

#### [SUN-530] Osteoclasts are multinucleated cells that degrade cartilage as well as bone

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

### [SUN-531] Microtubule Actin Crosslinking Factor 1 (MACF1) Positively Controls Osteoclastogenesis via Akt/GSK3β/NFATc1 Signaling Pathway

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

### [SUN-532] Macrophage-derived thymidine phosphorylase promotes osteoclastogenesis and bone resorption in inflammatory osteolysis

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

#### [SUN-533] TNF-α stimulates the expression of RANK during orthodontic tooth movement

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

### [SUN-534] Investigation of the contribution of osteoclastgenesis relevant cells to osteoclast formation in orthodontic tooth movement

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

### [SUN-535] Sex-specific increase in osteoclast differentiation and function by Pannexin1 channel deletion in TRAP-expressing cells

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

### [SUN-536] Inhibition of miR-29 activity in the myeloid lineage by expression of a miR-29 tough decoy enhances trabecular bone volume in male mice

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

#### [SUN-537] MicroRNA146a in human osteoclasts and Paget's disease of Bone

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

#### [SUN-538] Roles of TLR3 signaling in inflammatory bone resorption

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

#### [SUN-539] Osteoclasts are not a physiologically relevant source of SLIT3

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

#### [SUN-568] Osteocyte Lacunar Properties in Bone Tissue from Fracturing and Non-fracturing Women

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

#### [SUN-569] First evidence of osteocytes proliferation within their lacuna in vivo

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

### [SUN-570] Enlarged osteocyte lacunae in infantile bone are associated with heterogenous bone matrix mineralization

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

# [SUN-571] Disruption of the Aldehyde Dehydrogenase 2 Gene Increases Bone Anabolic Response to Intermittent PTH Treatment in Ovariectomized Mice Model.

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

#### [SUN-572] TNF-α Directly Enhances Osteocyte RANKL Expression and Promotes Osteoclast Formation

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

# [SUN-573] Direct Interactions between Multiple Myeloma Cells and Osteocytes in the Hypoxic Myeloma Microenvironment Induce a Pro-angiogenic Phenotype in Osteocytes

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

### [SUN-574] Investigation of the Role of TNF- $\alpha$ -Induced Sclerostin on Osteocytes during Orthodontic Tooth Movement

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

#### [SUN-575] Exogenous hyperthyroidism induces osteocytic osteolysis in male mice

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

#### [SUN-576] From Osteon Formation/Remodeling of Dog Bones to Loss of Cortical Bone in Human Bones

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

### [SUN-577] Circadian rhythm involves in the mechanical force-induced changes of spatiotemporal expression pattern of sclerostin

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

#### [SUN-578] Cx43 Regulates β-catenin Activity in Fully Differentiated Osteocytic Cells

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

#### [SUN-603] A 5 year study on Bone-Density Testing Interval in Orthotopic Liver Transplant recipients

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

#### [SUN-604] Musculoskeletal Failure: A Proposal

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

#### [SUN-605] Determinants of Vertebral Fracture Status and Trabecular Bone Score in Women With Fragility

#### Fractures: A Cross-sectional Sub-study of NoFRACT

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

### [SUN-606] Loss of Bone Microarchitecture Assessed by Trabecular Bone Score in BRCA Mutation Carriers Following Prophylactic Salpingo-Oophorectomy

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

### [SUN-607] Structural Parameters of Proximal Femur by 3D Dual-Energy X-ray Absorptiometry in Patients with Primary Hyperparathyroidism

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

#### [SUN-608] Evaluation of hip geometry parameters in patients with a distal radius fracture

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

#### [SUN-609] A New Method for Measuring Cortical Bone Parameters using HR-pQCT

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

### [SUN-610] Sex-related body habitus effect on relationship between DXA- and CT-based hip areal BMD in Koreans

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

#### [SUN-611] Ultrasonic Measurement of Bone Mineral Density at the 1/3 Radius with the UltraScan 650

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

### [SUN-612] Frailty In Combination With Trabecular Bone Score For Enhancing Predictive Accuracy Of Major Osteoporotic Fracture Risk

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

### [SUN-613] Cross-Sectional and Longitudinal Effects of Soft Tissue on a Beta Version of Trabecular Bone Score with Thickness-Based Correction: The Manitoba BMD Cohort

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

#### [SUN-614] HR-pQCT cross-calibration across multiple centres and timepoints: A precision study

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

#### [SUN-615] A Comparative Study of Hip Geometry in Older Adults with Acetabular Versus Hip Fractures

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

#### [SUN-616] Differences in Hip Geometry Between Female Subjects with and without Acute Hip Fracture

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

### [SUN-650] Efficiency of the Combining Use of Osteoporosis Screening Tool (OST) and FRAX in Screening Women with Low Bone Mass

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

### [SUN-651] Attenuated Association Between Proton Pump Inhibitor Use and Fracture Risk After Consideration of Chronic Comorbidities

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

### [SUN-652] HDL concentrations correlate negatively with bone mineral density in a population with history of fracture(s).

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

### [SUN-653] Peak Perimenopausal Lumbar Spine BMD is related to Fracture Risk in a Population-based Cohort of Midlife Women in the Canadian Multicentre Osteoporosis Study (CaMos)

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

### [SUN-654] Genetic predisposition to increased serum calcium on bone mineral density and the risk of fracture in individuals with normal calcium levels: a Mendelian randomization study

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

### [SUN-655] Association between Alcohol Intake and Bone Mineral Density: Mendelian Randomization Analysis

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

### [SUN-656] Individual Variation in Adaptive Immune Responses and Risk of Hip Fracture – A NOREPOS Population-Based Cohort Study

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

#### [SUN-657] Low Estradiol And High Luteinizing Hormone In Young Men With Distal Radius Fracture

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

### [SUN-658] Trabecular Bone Score (TBS) Decline During the Menopause Transition (MT) and Postmenopause:

Study of Women's Health Across the Nation (SWAN)

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

### [SUN-659] Higher Weight is Protective Against Menopausal Bone Loss Among Black and White Women: SWAN Longitudinal HR-pQCT Study

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

#### [SUN-660] Differences in Bone Status, Muscle Function, and Fat Mass Between Asian and Caucasian Women

September 22, 12:30 PM-02:30 PM

### [SUN-661] Glucocorticoid use, not Rheumatoid Arthritis, is a Risk Factor for Clinical Fractures -TOMMOROW Study in the Eighth Year-

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

#### [SUN-662] Prospective Study of Obstructive Sleep Apnea and Risk for Incident Fracture in Women

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

### [SUN-663] Mortality rate after fracture in kidney transplant patients: A population-based study using a healthcare administrative database

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

#### [SUN-664] Higher Mortality in Older Men with Poor Bone Microarchitecture - the STRAMBO Prospective Study

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

#### [SUN-665] Incidence Rates of Hip Fractures in Elderly Mexican Population Without Social Security

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

# [SUN-666] Small individual-level increase in bone mineral density translated into substantial population-level decrease in fracture incidence: revisiting Goeffrey Rose's axiom

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

# [SUN-667] Osteoporosis and osteoporotic fractures among community-dwelling postmenopausal women in China: preliminary results from a population-based, random-sampling, cross-sectional study

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

# [SUN-668] Osteoporosis and Hearing Loss in Older Koreans: Findings from the Korea National Health and Nutrition Examination Survey (KNHANES) 2009-2011

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

## [SUN-694] Houston Methodist Hospital's Fracture Liaison Service: An Innovative Approach to Osteoporotic Fracture Prevention

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

### [SUN-695] Post-Fracture Care Programs: A Literature Assessment of Where Secondary Fracture Prevention is Today

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

#### [SUN-696] Exploring the Association Between Vertebral Fracture Characteristics and Pain

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

#### [SUN-697] Development of a Framework to Evaluate the Ontario Osteoporosis Strategy

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

#### [SUN-698] How Exercise Professionals support Individuals with Acute Vertebral Fractures

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

#### [SUN-699] Exploring The Burden Of X-Linked Hypophosphatemia: A European Multi-Country Qualitative Study

September 22, 12:30 PM-02:30 PM

#### [SUN-714] Bone Health, Serum PTH and Serum Vitamin D in Young Female Pre-Professional Ballet Dancers

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

### [SUN-715] Effects of Vitamin D3 Supplementation on Body Composition in the VITamin D and OmegA-3 Fatty Acid TriaL (VITAL)

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

#### [SUN-716] Factors Contributing to Vitamin D Status Changes during Initial Military Training

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

#### [SUN-717] Vitamin D Status in 990 Medical Examinees at a Regional Public General Hospital

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

### [SUN-718] Vitamin D Deficiency and Postoperative Complications in Patients with Hip Dysplasia Undergoing Periacetabular Osteotomy and the Effect of Native Vitamin D Supplementation

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

#### [SUN-719] Vitamin D Deficiency or Insufficiency Screening Tools for Adults: A Systematic Review

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

### [SUN-720] Baseline Bone Turnover Balance is Associated with the 12-Month Trajectory of BMD in Exercising Women with Menstrual Disturbances

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

# [SUN-731] Volumetric mapping of total, bound and pore water as well as collagen protons in cortical bone using 3D ultrashort echo time (UTE) MR imaging techniques allows accurate diagnosis of osteopenia and osteoporosis

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

### [SUN-732] Association Between the Gut Microbiota ,Bone Metabolism and Fracture Risk in Japanese Postmenopausal Women

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

### [SUN-733] Osteal Macrophage Contributions to Adult Bone Homeostasis and Postmenopausal Osteoporosis Bone Pathology

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

# [SUN-746] Serum 25 hydroxyvitamin D levels, Trabecular Bone Score and Bone Mineral Density in patients with Differentiated Thyroid Cancer and TSH suppression therapy.

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

#### [SUN-747] Periprosthetic Fractures: The Next Osteoporosis Crisis

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

### [SUN-748] The relationship between menstrual disorders and bone metabolic markers in young female athletes.

September 22, 12:30 PM-02:30 PM

### [SUN-749] The effect of thyroid stimulating hormone suppressive therapy after thyroidectomy on postoperative bone health

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

### [SUN-750] An analysis of the pathogenesis of bone fragility in patients with liver cirrhosis: Measurement of bone microstructure with HR-pQCT

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

#### [SUN-751] Periodontal Disease and Mandibular Bone Mass in Postmenopausal Women with HIV

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

### [SUN-752] Altered bone strength and cortical bone parameters in young women with long-duration type 1 diabetes

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

### [SUN-753] Serum cross-linked carboxy-terminal telopeptide of type1 collagen(1CTP) is associated with interleukin(IL)-6 in a cohort of Japanese patients with diabetes mellitus

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

### [SUN-754] Efficacy and safety of three-year treatment with denosumab in post-kidney transplantation recipients

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

#### [SUN-782] Incidence of Atypical Fractures in the South-East-Asian population

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

### [SUN-783] Preventing Periodontitis or controlling its Progression Dramatically Reduces the Development of Bisphosphonate-related Osteonecrosis of the Jaw in Rice Rats (Oryzomys palustris)

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

#### [SUN-784] Longitudinal Effects of Combined Bone Anabolic Interventions on Ovariectomised Mice

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

### [SUN-785] Assessment of the effects of sequential treatment after discontinuing denosumab in 64 patients with postmenopausal osteoporosis

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

#### [SUN-786] The Effect of Thiazide Exposure in Preventing Osteoporotic Fractures: A Single Center Review

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

### [SUN-787] A Real-World Study of the Patient Experience of Osteoporosis Following Treatment with Abaloparatide

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

### [SUN-788] Predicting the Intervention Threshold for Initiating Osteoporosis Treatment among Post-Menopausal Women in China: A Cost-Effectiveness Analysis Based on Real-World Data

September 22, 12:30 PM-02:30 PM

### [SUN-789] The Slow and Sustained Release of a Low Dose of BMP-7 Accelerates Implant Healing in an Osteoporotic Environment

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

### [SUN-790] Clinical efficacy of denosumab comparison with either active vitamin D or native vitamin D on osteoporosis in patients with Japanese rheumatoid arthritis

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

#### [SUN-791] Switching from TPTD to DSMb would be the strongest sequential treatment for severe osteoporosis.

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

#### [SUN-792] Bone Marrow Aspirate Concentrate for Nonunions and Delayed Unions: A Systematic Review

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

### [SUN-793] One Year of Romosozumab Followed by Two Years of Denosumab Maintains Fracture Risk

#### Reduction: Analysis for the Japanese Population of Phase 3 FRAME Extension

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

#### [SUN-794] In vivo experiments with strontium HA nanoparticles loaded-implants.

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

### [SUN-795] A tool to improve adherence to anti-resorptive therapy: Using single energy images at time of DXA to reassure patients: Pilot project in a predominantly male population.

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

#### [SUN-796] The effect of combination therapy of PTH and vitamin D

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

### [SUN-797] Greater Fear of Falling is associated with Lower Exercise Self-efficacy in Older Women with Vertebral Fractures.

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

# [SUN-798] Clinical efficacy of denosumab in patients with osteoporosis between rheumatoid arthritis and primary osteoporosis

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

# [SUN-799] Glucocorticoid-induced loss of cortical bone at the femoral neck of micoro-mini pig are prevented by risedronate

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

### [SUN-800] Comparison of ONJ epidemiology in bisphosphonates long-term treated patients and switched to denosumab after tooth extraction

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

# [SUN-801] A Potential Next Generation Sclerostin Inhibitor Specifically Targets Sclerostin Monomer for Bone Anabolic Therapy with Low Cardiovascular Risk to Reverse Established Osteoporosis in Ovariectomized Rats

September 22, 12:30 PM-02:30 PM

## [SUN-825] Retinoic Acid Receptor-related Orphan Receptor Beta (Rorβ) Regulates Inflammation in Bone Environment by Inhibiting Interleukin 10 (II-10) Expression

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

### [SUN-826] Deficiency of Sphingosine-1-Phosphate Receptor 3 Does not Affect the Skeletal Phenotype of Mice Lacking Sphingosine-1-Phosphate Lyase

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

#### [SUN-827] A Novel Caspase 9 Inducible Apoptosis Mouse Model

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

#### [SUN-828] Role of Absent in Melanoma (AIM) 2 in Bone Integrity and Quality

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

#### [SUN-845] Local Gene Expression Patterns In Differentially Treated Segmental Bone Defects

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

#### [SUN-846] Abaloparatide Treatment improves Spinal Fusion in a Rat Posterolateral Fusion Model

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

#### [SUN-847] Comparative assessment of senolytic drugs in attenuating focal radiotherapy-related bone loss

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

#### [SUN-848] Modeling Key Metabolic and Skeletal Phenotypes of Human T2DM in the Mouse

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

#### [SUN-849] Tartrate-Resistant Acid Phosphatase 5b in Rat Serum and Plasma

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

#### [SUN-850] p-Cresyl sulfate causes bone fragility by osteocytes apoptosis in CKD bone

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

### [SUN-851] Protease-Activated Receptor 1 (PAR1) Deficiency is Associated with Reduced Bone Mass and Density in Mice

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

#### [SUN-852] Thalassemia Prevents Cancellous Bone Loss in Chronic Kidney Disease Mice

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

#### [SUN-853] Osteoporosis in a murine model of postmenopausal lupus

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

### [SUN-854] Towards mechanisms of bone regeneration and repair. Lessons learned from African spiny mice (Acomys)

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

### [SUN-855] A Protective Role of an FDA-Approved Generic Drug for Demyelination Against Neurogenic Muscle Atrophy

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

[SUN-856] Systemic Bone loss, Impaired Osteogenic Activity and Type I Muscle Fiber Atrophy in Mice with Elastase-Induced Pulmonary Emphysema: Establishment of a Chronic Obstructive Pulmonary Disease-Related Osteoporosis/Sarcopenia Mouse Model

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

[SUN-876] Vascular Endothelial Growth Factor Antibody (anti-VEGF) Monotherapy Causes Destructive Advanced Periodontitis but Not Osteonecrosis of the Jaw in Rice Rats (Oryzomys palustris)

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

[SUN-877] Effects of Yerba Mate (Ilex paraguariensis) with Different Antioxidant Capacity on Bone and Oxidative Stress Parameters

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

[SUN-878] Body Weight Loss Improves Bone Quality in High Fat Diet fed Female Rats following Short-term Treatment with a GLP1/glucagon Co-agonist and Food Restriction

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

[SUN-879] Antipsychotic induced bone loss: Impact on osteoporosis-associated back pain

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

[SUN-880] In Vivo Comparison of Skeletal and Osteocytic Responses to Abaloparatide and PTH 1-34

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

[SUN-881] Effects of teriparatide and low-intensity aerobic exercise on bone and fat parameters in rats

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

[SUN-882] Osteoprotective effects of oleanolic acid against bone loss are associated with its actions on fatty acid metabolism in aged female rats

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

[SUN-899] Quantifying Skeletal Burden in Fibrous Dysplasia using Sodium Fluoride PET/CT

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

[SUN-900] High Resolution Peripheral Quantitative Computed Tomography Supports an Endosteal Origin for Melorheostosis: Investigation of a 10-year-old Patient

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

[SUN-901] Peptide Receptor Radionuclide Therapy (PRRT) Appears to be Ineffective Therapy for Tumor-Induced Osteomalacia (TIO)

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

[SUN-902] Transient Osteoporosis of the Hip: A Rare Skeletal Disorder

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

[SUN-903] Novel Point Mutations of the PTK2B Gene Identified in Patients with Hypoparathyroidism and Primary Hyperparathyroidism

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

### [SUN-904] Mutational analysis of the PHEX gene and genotype-phenotype correlation in 37 Japanese patients with X-linked hypophosphatemic rickets

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

#### [SUN-905] Characterization of Pain in Patients with Fibrous Dysplasia

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

### [SUN-906] Benefits of Long-term Burosumab Persist in 11 Girls with X-Linked Hypophosphatemia (XLH) Who Transitioned into Adolescence during the Phase 2 CL201 Trial

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

### [SUN-907] Study on the molecular mechanism of Familial Paget's Disease of Bone with novel pathogenic gene ALS2 mutation

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

### [SUN-928] Differential muscle fiber typing and energetics defines a muscle weakness phenotype in HPP sheep

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

# [SUN-929] Biomechanical characterization of tibial articular cartilage in Hyp mice, a murine model of osteoarthritis in X-linked hypophosphatemia.

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

# [SUN-930] Cross-linked collagen peptides as non-invasive urinary biomarkers of bone quality in patients with Osteogenesis Imperfecta

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

### [SUN-931] Identification of a critical amino acid residue in ALK2 for the binding and inhibition by the anti-ALK2 blocking antibody

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

#### [SUN-932] Epigenetic regulation of fibrous dysplasia severity in bone: the mirDYS study.

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

### [SUN-933] Establishment of a first conditional knock in mice as a disease model for autosomal dominant osteopetrosis type II (ADO2)

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

#### [SUN-934] Quantitative Increase in T Regulatory Cells Enhances Bone Remodeling In Osteogenesis Imperfecta

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

### [SUN-935] Genetic loss of heparanase does not inhibit osteochondromas in Ext1 and Ext2 double heterozygous multiple osteochondroma mouse model.

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

#### [SUN-936] Mechanism of Anti-TGF-β Antibody on Osteoblasts and Osteoclasts in Osteogenesis Imperfecta

September 22, 12:30 PM-02:30 PM

### [SUN-937] Metabolic Phenotype in a Mouse Model of Dominant Osteogenesis Imperfecta is Driven by Osteocalcin.

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

#### [SUN-938] Tmem178 negatively regulates IL-1β production through inhibition of the NLRP3 inflammasome

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

#### [SUN-957] Impaired Physical Function in Normocalcemic Primary Hiperparathyroidism

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

### [SUN-958] EWGSOP-2 vs. EWGSOP-1: Impact on Prevalence of Sarcopenia in Postmenopausal Women Aged 60 Years and Older – Preliminary Report

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

#### [SUN-959] Which diagnosis of sarcopenia presents greater association with clinical vulnerability?

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

### [SUN-960] Lower hand grip strength in older adults with non-alcoholic fatty liver disease: a nationwide population-based study

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

### [SUN-961] Higher Concentrations of Parathyroid Hormone (PTH) are Associated with Reduced Gait Velocity in Adults: A Systematic Review

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

### [SUN-962] Prevalence of Sarcopenia in Patients with a Recent Fracture According to the revised EWGSOP definition

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

# [SUN-963] Toward a novel muscle anabolic strategy for sarcopenia: targeting the interaction between long noncoding RNA IncRNA-3 and MyoD1 promoter to promote myogenesis

September 22, 12:30 PM-02:30 PM

West Hall C/Orange County Convention Center

### Oral Poster Session II: Basic & Translational

September 22, 2019, 12:45 PM

West Hall C/Orange County Convention Center

New this year! Come hear a select number of plenary poster presenters give an overview of their poster on digital touch screen displays. Following the oral poster presentations, visit their poster board to ask questions and continue the discussion.

### [FRI-442] Macrophage-Lineage TRAP+ Cells Recruit Periosteum-Derived Cells for Periosteal Osteogenesis and Regeneration

September 22, 12:45 PM-12:50 PM

West Hall C/Orange County Convention Center

### [FRI-286] Sptbn1 disruption increases osteocyte membrane fragility, leading to impaired cell viability and a blunted mechanotransduction response following mechanical loading

September 22, 12:50 PM-12:55 PM

### [FRI-287] Irisin Attenuates Osteoarthritis by Inhibiting Apoptosis of Osteocyte through Activating Erk Signaling Pathway

September 22, 12:55 PM-01:00 PM

West Hall C/Orange County Convention Center

#### [FRI-357] Prevention of ectopic calcification by MGP: The role of its conserved residues

September 22, 01:00 PM-01:05 PM

West Hall C/Orange County Convention Center

### [FRI-388] Characterization of a novel perivascular DMP1+ osteoprogenitor associated with trans-cortical channels of long bone

September 22, 01:05 PM-01:10 PM

West Hall C/Orange County Convention Center

### [FRI-728] TRAF3 in mesenchymal progenitor cells limits low-level chronic inflammation associated with osteoporosis by inhibiting GSK-3β induced NF-KB activation

September 22, 01:10 PM-01:15 PM

West Hall C/Orange County Convention Center

### [FRI-337] Improved Skeletal Phenotype And Accelerated Intramembranous Bone Healing Post Tooth Extraction in Alox5 Knockout Senescent Female Mice

September 22, 01:15 PM-01:20 PM

West Hall C/Orange County Convention Center

#### [FRI-236] Identification of Genetic Variants for Peak Bone Mineral Content in Young Adult Women

September 22, 01:20 PM-01:25 PM

West Hall C/Orange County Convention Center

### [FRI-238] Lipidomic and Metabolomic Profiles in Women with Low and High Bone Mineral Density: Searching for Early Serum Metabolic Biomarkers for Osteoporosis Risk

September 22, 01:25 PM-01:30 PM

West Hall C/Orange County Convention Center

#### [FRI-240] Genome-wide association meta-analysis identifies six loci for osteocalcin levels

September 22, 01:30 PM-01:35 PM

West Hall C/Orange County Convention Center

### **Oral Poster Session II: Clinical**

September 22, 2019, 12:45 PM

West Hall C/Orange County Convention Center

New this year! Come hear a select number of plenary poster presenters give an overview of their poster on digital touch screen displays. Following the oral poster presentations, visit their poster board to ask questions and continue the discussion.

### [FRI-631] Five-fold Increased Atypical Femur Fracture Risk Among North American Asians is Similar Across Asian Ethnic Subgroups and Is Not Explained by Confounding Variables

September 22, 12:45 PM-12:50 PM

West Hall C/Orange County Convention Center

### [FRI-589] MRI-based textural analysis of trabecular bone: a novel method for opportunistic screening of bone quality

September 22, 12:50 PM-12:55 PM

West Hall C/Orange County Convention Center

### [FRI-708] Effectiveness of Resistance and Jump Training or Machine-based Isometric Training for Middle-aged and Older Men with Osteopenia and Osteoporosis: LIFTMOR for Men Trial Preliminary Findings

September 22, 12:55 PM-01:00 PM

### [FRI-709] High impact exercise increased femoral neck bone density with no adverse effects on imaging markers of knee osteoarthritis in postmenopausal women

September 22, 01:00 PM-01:05 PM

West Hall C/Orange County Convention Center

[FRI-598] Prevalence of Spinal Osteoporosis in Women and Men Considering Both Bone Strength and Volumetric BMD — A Comparison of Caucasians (in the United States) and Koreans (in Korea)

September 22, 01:05 PM-01:10 PM

West Hall C/Orange County Convention Center

[FRI-597] Comparison of the predictive ability of quantitative and qualitative scoring methods of osteoporotic vertebral fractures using operational skeletal fragility outcomes

September 22, 01:10 PM-01:15 PM

West Hall C/Orange County Convention Center

[FRI-594] External bone size predicts age-changes in femoral neck structure and mass leading to increased fracture risk independent of bone mineral density: Findings from the Study of Women's Health Across the Nation and the Study of Osteoporotic Fractures in Men

September 22, 01:15 PM-01:20 PM

West Hall C/Orange County Convention Center

[FRI-599] Measured Height Loss Predicts Incident Clinical Fractures Independently from FRAX: A Registry-Based Cohort Study

September 22, 01:20 PM-01:25 PM

West Hall C/Orange County Convention Center

[FRI-641] Differential Risk of Fracture Attributable to Type 2 Diabetes Mellitus According to Skeletal Site

September 22, 01:25 PM-01:30 PM

West Hall C/Orange County Convention Center

[FRI-642] Associations of Clinically Unrecognized vs Clinically Recognized Vertebral Fracture with Subsequent Mortality

September 22, 01:30 PM-01:35 PM

West Hall C/Orange County Convention Center

### **Concurrent Orals: Advances in Osteoporosis Treatment**

September 22, 2019, 02:45 PM

Valencia Ballroom B-D/Orange County Convention Center

- Kristina Akesson MD, PhD, Skane University Hospital, Malmo, Lund University, Sweden, Moderator
- E. Michael Lewiecki MD, New Mexico Clinical Research & Osteoporosis Center, United States, Moderator

[1085] Efficacy and Safety of Romosozumab vs Placebo Among Patients With Mild-to-Moderate Chronic Kidney Disease (CKD)

September 22, 02:45 PM-03:00 PM

Valencia Ballroom B-D/Orange County Convention Center

[1086] Sclerostin expression is down-regulated in advanced atherosclerotic plaques and is not associated with coronary artery disease or peripheral artery disease prior to, or major cardiovascular events in the 3-year period following, surgical endarterectomy

September 22, 03:00 PM-03:15 PM

Valencia Ballroom B-D/Orange County Convention Center

[1087] Altered Bone Quality in Long-Term Bisphosphonate Users with Atypical Femur Fracture (AFF)

September 22, 03:15 PM-03:30 PM

Valencia Ballroom B-D/Orange County Convention Center

[1088] Bone Quality and Long-Term Bisphosphonate Use in Women with Osteoporosis

September 22, 03:30 PM-03:45 PM

Valencia Ballroom B-D/Orange County Convention Center

[1089] Predicting Fracture Risk During a Bisphosphonate Holiday in the FIT Long-term Extension (FLEX)

Study: Comparison of a Custom Risk Tool vs FRAX

September 22, 03:45 PM-04:00 PM

Valencia Ballroom B-D/Orange County Convention Center

[1090] Surrogate threshold effect: a novel approach for potential approval of new osteoporosis treatments using change in BMD. Study-level analysis from the FNIH Bone Quality Project

September 22, 04:00 PM-04:15 PM

Valencia Ballroom B-D/Orange County Convention Center

# **Concurrent Orals: Greg Mundy Memorial Session: Bone Tumors and Metastasis**

September 22, 2019, 02:45 PM

Valencia Ballroom A/Orange County Convention Center

- · James Edwards PhD, University of Oxford, United Kingdom, Moderator
- Jean Jiang PhD, University of Texas Health Science Center at San Antonio, United States, Moderator

[1091] Bone-Targeted Inhibition of Notch Signaling Blocks Tumor Growth and Prevents Bone Loss Without Inducing Gut Toxicity In Immunodeficient and Immunocompetent Murine Models of Established Multiple Myeloma

September 22, 02:45 PM-03:00 PM

Valencia Ballroom A/Orange County Convention Center

[1092] Epigenetic activation of LIFR and stimulation of pro-dormancy genes by HDAC inhibitors promotes tumor dormancy in breast cancer cells that home to bone

September 22, 03:00 PM-03:15 PM

Valencia Ballroom A/Orange County Convention Center

[1093] RGS12 is a potential tumor suppressor of osteosarcoma and lung metastasis via negatively regulating YAP-TEAD1-ezrin signaling

September 22, 03:15 PM-03:30 PM

Valencia Ballroom A/Orange County Convention Center

[1094] PTH-induced bone anabolism promotes systemic breast cancer growth and metastasis

September 22, 03:30 PM-03:45 PM

Valencia Ballroom A/Orange County Convention Center

[1095] Ectopic Osterix (OSX) positive stromal cells in the tumor microenvironment enhance tumor growth and express CD45

September 22, 03:45 PM-04:00 PM

Valencia Ballroom A/Orange County Convention Center

[1096] JAB1 Promotes Osteosarcoma and Chondrosarcoma Pathogenesis and Is a Novel Target for Clinical Intervention

September 22, 04:00 PM-04:15 PM

Valencia Ballroom A/Orange County Convention Center

# Concurrent Orals: Musculoskeletal Progenitors and Lineage Determination

September 22, 2019, 02:45 PM

W315/Orange County Convention Center

- · Brya Matthews PhD, University of Auckland, New Zealand, Moderator
- Jonathan Rios PhD, Texas Scottish Rite Hospital for Children, United States, Moderator

### [1097] Smad-dependent BMP signaling in cranial neural crest cells directs their cell fate towards chondrogenic lineage to cause midline craniosynostosis

September 22, 02:45 PM-03:00 PM

W315/Orange County Convention Center

#### [1098] Presence of Lgr6, an Adult Stem Cell Marker and Auxiliary Wnt receptor, in the Periosteum

September 22, 03:00 PM-03:15 PM

W315/Orange County Convention Center

#### [1099] Diabetes reduces regenerative capacity of periosteal progenitors

September 22, 03:15 PM-03:30 PM

W315/Orange County Convention Center

### [1100] PDGFR $\beta$ Signaling Drives the Expansion, Recruitment and Blood Vessel Affinity of Skeletal Stem and Progenitor Cells for Bone Repair

September 22, 03:30 PM-03:45 PM

W315/Orange County Convention Center

#### [1101] Macrophage Lineage Hdac3 Deletion Enhances Bone Healing and Limits Osteoclast Fusion via Pmepa1

September 22, 03:45 PM-04:00 PM

W315/Orange County Convention Center

### [1102] Single-cell analysis unveils cellular plasticity of perisinusoidal marrow stromal cells in bone regeneration

September 22, 04:00 PM-04:15 PM

W315/Orange County Convention Center

### **Concurrent Orals: Osteocytes**

September 22, 2019, 02:45 PM

W414/Orange County Convention Center

- · Mitchell Schaffler PhD, City College of New York, United States, Moderator
- Paola Divieti Pajevic MD, PhD, Goldman School of Dental Medicine, Boston University, United States, Moderator

#### [1103] Pinch1/2 regulate bone homeostasis through control of sclerostin expression and bone formation

September 22, 02:45 PM-03:00 PM

W414/Orange County Convention Center

#### [1104] Diminished Mechanosensing of Murine Osteocytes in Newly Formed Cortical Bone Following Short-Term Sclerostin Antibody Treatment is Restored Following Long-Term Treatment

September 22, 03:00 PM-03:15 PM

W414/Orange County Convention Center

#### [1105] A Novel SP7/OSTN Axis Controls Osteocyte Morphology and Function

September 22, 03:15 PM-03:30 PM

W414/Orange County Convention Center

#### [1106] A FAK/class Ila HDAC signaling axis controls osteocyte mechanotransduction

September 22, 03:30 PM-03:45 PM

W414/Orange County Convention Center

#### [1107] Rapid lysosomal degradation of sclerostin in osteocytes following mechanical load

September 22, 03:45 PM-04:00 PM

W414/Orange County Convention Center

# [1108] Conditional Deletion of CaMKK2 from Osteocytes Elicits Sex-Divergent Effects on Bone Remodeling by modulating Osteoclasts

September 22, 04:00 PM-04:15 PM

W414/Orange County Convention Center

### **Networking Break**

September 22, 2019, 04:15 PM Valencia Foyer/Orange County Convention Center

### **Concurrent Orals: Chondrocytes**

September 22, 2019, 04:30 PM

W314/Orange County Convention Center

- Sylvain PROVOT PhD, INSERM, France, Moderator
- Eileen Shore PhD, University of Pennsylvania, United States, Moderator

[1109] Glut1 is required for growth plate and articular chondrocyte homeostasis during postnatal growth

September 22, 04:30 PM-04:45 PM

W314/Orange County Convention Center

[1110] Calcium-sensing Receptors in Chondrocytes Are Required for Post-natal Bone Growth, Callus Maturation, and Fracture Healing in Mice

September 22, 04:45 PM-05:00 PM

W314/Orange County Convention Center

[1111] The Transcriptional Cofactor Jab1 Is Crucial for BMP-Mediated Mouse Chondrogenesis by Repressing p53 Activity.

September 22, 05:00 PM-05:15 PM

W314/Orange County Convention Center

[1112] Oleanolic acid, a natural triterpenoid and inhibitor of Notch pathway as a potential treatment for knee osteoarthritis

September 22, 05:15 PM-05:30 PM

W314/Orange County Convention Center

[1113] Lin28a reactivation during OA induces chondrocyte reprogramming by HMGA2

September 22, 05:30 PM-05:45 PM

W314/Orange County Convention Center

### Concurrent Orals: Cutting Edge Technologies in the Clinic

September 22, 2019, 04:30 PM

W414/Orange County Convention Center

• Marcella Walker MD, Columbia University, United States, Moderator

[1114] Exploring whole exomes in young women with pregnancy and lactation associated osteoporosis

September 22, 04:30 PM-04:45 PM

W414/Orange County Convention Center

[1115] Towards personalized medicine using combinations of different BMD-related genetic risk scores for separate prediction of hip, wrist and vertebral fractures as well as of trabecular and cortical bone

September 22, 04:45 PM-05:00 PM

W414/Orange County Convention Center

[1116] Gene expression imputation identifies candidate genes associated with osteoporosis

September 22, 05:00 PM-05:15 PM

W414/Orange County Convention Center

[1117] A Novel Fracture Prediction Model Using Machine Learning in Community-Based Cohort Study

September 22, 05:15 PM-05:30 PM

W414/Orange County Convention Center

[1118] Do machine learning techniques improve prediction of bone mineral density? A comparative analysis of genomic data from 5,103 Individuals with 1,103 SNPs in Mr.OS Study

September 22, 05:30 PM-05:45 PM W414/Orange County Convention Center

### **Concurrent Orals: Nutrition and Pharmacology of Bone**

September 22, 2019, 04:30 PM

W315/Orange County Convention Center

- Richard Prince FRACP, MBBS, MD, University of Western Australia, Australia, Moderator
- · Xiaowei Liu PhD, University of Pennsylvania, United States, Moderator

#### [1119] Microbiota Produced Butyrate Is Required for the Anabolic Effects of PTH in Bone

September 22, 04:30 PM-04:45 PM

W315/Orange County Convention Center

### [1120] 1,25(OH)2D Plays an Important Role in the Prevention of Mandibular Osteoporosis via the Deacetylase Sirtuin-1 (Sirt1)

September 22, 04:45 PM-05:00 PM

W315/Orange County Convention Center

### [1121] S-Allylmercapto-N-Acetylcysteine (ASSNAC) Attenuates Alendronate-Induced Oxidative Stress in the Bone Marrow and Improves Bone Morphometry in Ovariectomized Mice

September 22, 05:00 PM-05:15 PM

W315/Orange County Convention Center

### [1122] Engineering Abaloparatide to Accumulate Locally in Fracture Calluses Following Systemic Administration

September 22, 05:15 PM-05:30 PM

W315/Orange County Convention Center

[1123] Involvement of the gut microbiota and barrier function in glucocorticoid induced osteoporosis.

September 22, 05:30 PM-05:45 PM

W315/Orange County Convention Center

### **Concurrent Orals: Osteoporosis Outcomes**

September 22, 2019, 04:30 PM

Valencia Ballroom A/Orange County Convention Center

• Douglas Bauer MD, University of California, San Francisco, United States, Moderator

# [1124] The association of bone turnover during the menopause transition and subsequent fracture: results from the Study of Women's Health Across the Nation

September 22, 04:30 PM-04:45 PM

Valencia Ballroom A/Orange County Convention Center

#### [1125] Racial Disparities Exist in Outcomes Post Major Fragility Fractures

September 22, 04:45 PM-05:00 PM

Valencia Ballroom A/Orange County Convention Center

### [1126] Implementation of Fracture Liaison Services in two Swedish hospitals was associated with reduced risk of recurrent clinical fractures in patients with osteoporotic fracture

September 22, 05:00 PM-05:15 PM

Valencia Ballroom A/Orange County Convention Center

# [1127] Associations Between Health Service Use and Quality of Life 4-months After Osteoporotic Fracture in Older Adults: An Analysis of Data from the Australian Arm of the International Cost and Utility Related to Osteoporotic Fractures Study (AusICUROS)

September 22, 05:15 PM-05:30 PM

Valencia Ballroom A/Orange County Convention Center

### [1128] The Distribution of Increases in Hip Cortical Volumetric BMD in Patients Treated with Denosumab and Bisphosphonates by 3D Modeling of Hip DXA

September 22, 05:30 PM-05:45 PM Valencia Ballroom A/Orange County Convention Center

### ASBMR Town Hall Meeting

September 22, 2019, 06:00 PM W308/Orange County Convention Center

### **Adult Bone and Mineral Working Group**

September 22, 2019, 07:15 PM W304 AB/Orange County Convention Center 7:15 Opening Remarks and Dinner

Introduction of Co-Chairs:

Suzanne Jan de Beur MD, Johns Hopkins, USA

Michael Collins MD, National Institute of Health, USA

Anne Schafer MD, University of California, San Francisco, USA

#### 7:30 Historical Vignette

"Causes and Treatment of Bone Fragility in Secondary Osteoporosis: An Unexpected, but Rewarding Journey"

Peter Ebeling, MBBS, MD, FRACP

Monash University

- 8:00 The Evolving Story of FGF23 and Erythropoietin. Hartley IR, Kamilaris CD, Collins MT. NIDCR, National Institutes of Health. Bethesda, MD
- 8:15 X-linked Hypophosphatemia and Hypoparathyroidism: Correction of Renal Phosphate Wasting Despite Markedly Elevated C-terminal and Intact FGF23. McKenna MJ<sup>1-3</sup>, Crowley R<sup>1,3</sup>, Twomey PJ <sup>2,3</sup>, Kilbane MT <sup>2,3</sup>. Departments of <sup>1</sup>Endocrinology and <sup>2</sup>Clinical Chemistry, St. Vincent's University Hospital, Dublin, and <sup>3</sup>UCD School of Medicine and Medical Science, University College Dublin, Dublin, Ireland.
- 8:30 Continuous Subcutaneous Delivery of rhPTH(1-84) by Pump in Adults with Hypoparathyroidism. Bove-Fenderson E<sup>1</sup>, Wong D<sup>2</sup>, Cusano N<sup>3</sup>, Mannstadt M<sup>1,41</sup>Endocrine Unit, Massachusetts General Hospital, Boston, MA; <sup>2</sup>Sutter Health, Sacramento, CA; <sup>3</sup>Department of Medicine, Lenox Hill Hospital, New York, NY; <sup>4</sup>Harvard Medical School, Boston, MA.
- 8:45 Raine Syndrome as a Rare Cause of Hypophosphatemia and Osteosclerosis in an Adult. Mamedova EO, Davtyan DA, Przhiyalkovskaya EG, Vasilyev EV, Tiulpakov AN, Belaya ZE. The National Medical Research Centre for Endocrinology, Moscow, Russia.
- 9:00 A Case of Multiple, Recurrent Vertebral Compression Fractures with Two Heterozygous Mutations of the LUNATIC FRINGE (LFNG) gene. Hong N<sup>1</sup>, Rhee Y<sup>1</sup>. Department of Internal Medicine, Severance Hospital, Endocrine Research Institute, Yonsei University College of Medicine, Seoul 120-752, Korea.

9:15 Novel Use of Burosumab in Refractory Iron-induced FGF23 Mediated Hypophosphataemic Osteomalacia. Amarnani R <sup>1</sup>, Pinedo-Villanueva R<sup>1</sup>, Shine B<sup>2</sup>, Partington K<sup>3</sup>, Keshav S<sup>4</sup>, Travis S<sup>4</sup>, Javaid MK<sup>1</sup>.

<sup>1</sup> Nuffield Department of

Orthopaedics, Rheumatology and Musculoskeletal Sciences, The University of Oxford, Oxford, United Kingdom, <sup>2</sup>Department of Clinical Biochemistry, Oxford University Hospitals NHS Trust, Oxford, United Kingdom, <sup>3</sup> Department of Radiology, Oxford University Hospitals NHS Trust, Oxford, United Kingdom, <sup>4</sup> Translational Gastroenterology Unit, NIHR Oxford Biomedical Research Centre, Oxford University Hospitals NHS Foundation Trust, Oxford, United Kingdom.

9:30 Pain in the Neck – An Unusual Presentation of Myositis Ossificans. Gruber L, Wermers R. Department of Medicine, Mayo Clinic, Rochester, Minnesota.

9:45 Postsurgical Hypoparathyroidism and Hungry Bone Syndrome after Total Parathyroidectomy for Renal Hyperparathyroidism in a Patient with Possible Nail Patella Syndrome. Folick A<sup>1</sup>, Fu P<sup>1</sup>, Schafer AL<sup>1,2</sup>, Shoback DM<sup>1,2</sup>. <sup>1</sup>Division of Endocrinology and Metabolism, University of California, San Francisco, CA; <sup>2</sup>Endocrine Research Unit, Department of Veterans Affairs Medical Center, San Francisco, CA.

10:00 Presentation of the Boy Frame Award to Dr Peter Ebeling

### **Pediatric Bone and Mineral Working Group**

September 22, 2019, 07:15 PM W304 EFG/Orange County Convention Center

7:15 Opening Remarks and Dinner

7:20 Presentation of the First Annual Pediatric Working Group Award for Contributions to Children's Bone health

7:25 Topic: My Journey Through Science and Pediatrics

#### Francis Glorieux, OC, MD, PhD

**Emeritus Director of Research** 

Shriners Hospital for Children-Canada

Emeritus Professor of Surgery, Pediatrics and Human Genetics

McGill University

8:05 Topic: Practical and Ethical Challenges in Pediatric Rare Disease Clinical Trials

#### Emil Kakkis MD, PhD

President and Chief Executive Officer, Ultragenyx Pharmaceutical Inc.

Founder, EveryLife Foundation for Rare Diseases

#### Scientific Abstract Presentations:

8:45	Presenter 1, TBD
8:55	Presenter 2, TBD
9:05	Presenter 3, TBD
9:15	Presenter 4, TBD
9:25	Closing Remarks

Supported by educational grants from Biomarin, Regeneron, Ultragenyx and QED therapeutics

### **Working Group on Aging**

September 22, 2019, 07:15 PM W307 A/Orange County Convention Center

2019 Working Group on Aging

7:15 pm - 9:30 pm

Moderated by: Lynda Bonewald, PhD and Deborah Kado, MD, MS

7:15 pm Opening Remarks and Dinner

7:30 pm "Longitudinal trajectories of change in the mouse frailty index as a biomarker of lifespan and healthspan"

Rafa de Cabo, PhD, Translational Gerontology Branch, NIH NIA

8:00 pm "Leveraging a Sex-Dependent Brain-Bone Circuit to Build Dense, Strong Bones During Aging"

Holly Ingraham, PhD, Univ California, San Francisco, USA

8:30 pm "Biomarkers for Human Aging"

Steve Cummings, MD, FACP, Univ California San Francisco, USA

9:00 pm Open Discussion

### **Diversity in Bone and Mineral Research Networking Reception**

September 22, 2019, 07:30 PM

Room TBD/Orange County Convention Center

This reception provides attendees the opportunity to meet other attendees and ASBMR leadership, including the ASBMR Diversity in Bone and Mineral Research Subcommittee, in an interactive environment. Come to network, celebrate diverse members of ASBMR, and learn how the Diversity in Bone and Mineral Research Subcommittee is working to promote inclusiveness and participation of the Society's diverse members, particularly focusing on individuals from underrepresented racial and ethnic groups and individuals with disabilities.

### **Registration Open**

September 23, 2019, 07:30 AM

Valencia Ballroom Lobby/Orange County Convention Center

### Plenary Orals: Bone Cell Development and Function

September 23, 2019, 08:00 AM

W414/Orange County Convention Center

- Mary Farach-Carson PhD, University of Texas Health Science Center at Houston, School of Dentistry, United States, Moderator
- Kent Soe MS, PhD, Odense University Hospital, University of Southern Denmark, Denmark, Moderator

# [1129] Intravital imaging of osteoclasts in vivo reveals novel osteoclast fate which may underlie the therapeutic response to Denosumab withdrawal

September 23, 08:00 AM-08:15 AM

W414/Orange County Convention Center

#### [1130] Glycosaminoglycans are Critical Regulators for Limb Bud Outgrowth

September 23, 08:15 AM-08:30 AM

W414/Orange County Convention Center

#### [1131] Smoc1 and Smoc2 Regulate Bone Formation as the Novel Downstream Molecules of Runx2

September 23, 08:30 AM-08:45 AM

W414/Orange County Convention Center

### [1132] Single cell transcriptomics identifies a unique adipocyte population that regulates bone marrow environment

September 23, 08:45 AM-09:00 AM

W414/Orange County Convention Center

# [1133] Osteocyte-specific deletion of the auxiliary $\alpha 2\delta 1$ voltage sensitive calcium channel subunit impairs skeletal strength and decreases both lean and fat masses.

September 23, 09:00 AM-09:15 AM

W414/Orange County Convention Center

### Plenary Orals: Rare Bone Diseases: Translational Studies

September 23, 2019, 08:00 AM

Valencia Ballroom A/Orange County Convention Center

- · Michael Collins MD, National Institutes of Health, United States, Moderator
- Josephine Tauer MS, PhD, Shriners Hospital for Children and McGill University, Canada, Moderator

### [1134] SMAD3 Somatic Activating Mutations Cause Melorheostosis with an Endosteal Radiographic Pattern by Upregulating the TGF-B/SMAD Pathway

September 23, 08:00 AM-08:15 AM

Valencia Ballroom A/Orange County Convention Center

### [1135] 4-phenylbutyrate (4PBA) Ameliorates Growth Deficiency in G610C Mouse Model of Osteogenesis Imperfecta

September 23, 08:15 AM-08:30 AM

Valencia Ballroom A/Orange County Convention Center

### [1136] Inhibition of mTOR Induces Autophagy and Improves Skeletal Manifestations of Osteogenesis Imperfecta in Mice

September 23, 08:30 AM-08:45 AM

Valencia Ballroom A/Orange County Convention Center

#### [1137] Local Transplantation of Skeletal Progenitor Cells Improves Bone Properties in Osteogenesis Imperfecta Mice

September 23, 08:45 AM-09:00 AM

Valencia Ballroom A/Orange County Convention Center

[1138] A potential next generation sclerostin inhibitor specifically targets sclerostin monomer for bone anabolic therapy with low cardiovascular risk in osteogenesis imperfecta mice

September 23, 09:00 AM-09:15 AM

Valencia Ballroom A/Orange County Convention Center

### **Discovery Hall Open**

September 23, 2019, 09:30 AM West Hall C/Orange County Convention Center

### **Networking Break**

September 23, 2019, 09:30 AM Room TBD/Orange County Convention Center

### **Posters Open**

September 23, 2019, 09:30 AM

West Hall C/Orange County Convention Center

All posters will be displayed in the ASBMR Discovery Hall from Saturday, September 21 through Monday, September 23. For a full listing of e-poster, poster and late-breaking poster presentations, please refer to the poster section of the onsite program book.

### Symposium: Bone Pain

September 23, 2019, 09:45 AM

W414/Orange County Convention Center

- · Florent Elefteriou PhD, Baylor College of Medicine, United States, Chair
- Nadia Rucci PhD, University of L Aquila, Italy, Chair

#### **Mechanical Activation of Sensory Nerves in Bone**

Ryan Tomlinson PhD, Thomas Jefferson University, United States

September 23, 09:45 AM-10:10 AM

W414/Orange County Convention Center

#### **Mechanistic Analysis of Bone Pain**

Tamara King PhD, University of New England, United States

September 23, 10:10 AM-10:35 AM

W414/Orange County Convention Center

#### Clinical Approach to Malignant and Nonmalignant Bone Pain

Peyman Hadji MD, Krankenhaus Nordwest, Dept of Bone Oncology, Germany

September 23, 10:35 AM-11:00 AM

W414/Orange County Convention Center

### Symposium: Transgender Medicine and Bone

September 23, 2019, 09:45 AM

Valencia Ballroom A/Orange County Convention Center

- Micol Rothman MD, University of Colorado- Denver, United States, Chair
- · Leanne Ward MD, Children s Hospital of Eastern Ontario, Canada, Chair

### Physiological Effects of Estrogen and Testosterone on Bone: Implications for Treatment of Transgender Individuals

• Sundeep Khosla MD, Mayo Clinic College of Medicine, United States

September 23, 09:45 AM-10:10 AM

Valencia Ballroom A/Orange County Convention Center

### Gender-Affirming Medical Therapies in Gender Diverse Youth: Skeletal Considerations of Early Pubertal Suppression

• Janet Lee MD, MPH, University of California, San Francisco, United States

September 23, 10:10 AM-10:35 AM

Valencia Ballroom A/Orange County Convention Center

### Effect of Cross-Sex Hormone Therapy on Bone in the Trans Adult Who Begins Treatment After Achieving Peak Bone Mass

Martin Den Heijer MD, PhD, VU Medical Center Pb 7057 1007 MB Amsterdam, Netherlands

September 23, 10:35 AM-11:00 AM

Valencia Ballroom A/Orange County Convention Center

### **Networking Break**

September 23, 2019, 11:00 AM Room TBD/Orange County Convention Center

### Late-Breaking Concurrent Orals: Basic and Translational I

September 23, 2019, 11:15 AM

W314/Orange County Convention Center

- Serge Ferrari MD, Geneva University Hospital and Faculty of Medicine, Switzerland, Moderator
- Ernestina Schipani MD, PhD, University of Michigan, United States, Moderator

### [LB-1159] Abaloparatide is more effective than PTH in promoting bone gain under physiological conditions and in established Type 1 Diabetes in male mice

September 23, 11:15 AM-11:30 AM

W314/Orange County Convention Center

[LB-1160] Tendon Mechanical Property Degradation Associated With Osteoporosis: A Study In An Ovine Model September 23, 11:30 AM-11:45 AM

W314/Orange County Convention Center

[LB-1161] A Brain-Dependent Osteogenic Factor Dramatically Enhances the Capacity of Skeletal Stem Cells to form Bone in Female Mice

September 23, 11:45 AM-12:00 PM

W314/Orange County Convention Center

### Late-Breaking Concurrent Orals: Basic and Translational II

September 23, 2019, 11:15 AM

W315/Orange County Convention Center

[LB-1162] FGF23 Promotes Disease Progression in 5/6-Nephrectomized Mice By WNK and Proinflammatory Signaling

September 23, 11:15 AM-11:30 AM

W315/Orange County Convention Center

#### [LB-1163] Inhibition of FGFR signaling partially rescues osteoarthritis in mice overexpressing high-molecularweigh FGF2

September 23, 11:30 AM-11:45 AM

W315/Orange County Convention Center

[LB-1164] A NaPi2a-selective inhibitor improves hyperphosphatemia in Fgf23-null and CKD mice

September 23, 11:45 AM-12:00 PM

W315/Orange County Convention Center

### Late-Breaking Concurrent Orals: Clinical I

September 23, 2019, 11:15 AM

Valencia Ballroom A/Orange County Convention Center

· Roger Bouillon MD, PhD, Katholieke Universiteit Leuven, Belgium, Moderator

#### [LB-1165] Improvements in adolescent bone persist three years after resistance training intervention

September 23, 11:15 AM-11:30 AM

Valencia Ballroom A/Orange County Convention Center

# [LB-1166] Trabecular-Cortical Interface Surface Area Metric (iSAM): an Intuitive & Novel Whole Bone Morphological Parameter That Strongly Correlates with Finite Element Predicted Stiffness of Clinical HR-pQCT Scans

September 23, 11:30 AM-11:45 AM

Valencia Ballroom A/Orange County Convention Center

# [LB-1167] Compared with Daily Teriparatide, Cycles of Teriparatide and Raloxifene Favorably Influence Hip BMD and Cortical Thickness While Comparably Increasing Spine BMD

September 23, 11:45 AM-12:00 PM

Valencia Ballroom A/Orange County Convention Center

### **Late-Breaking Concurrent Orals: Clinical II**

September 23, 2019, 11:15 AM

W414/Orange County Convention Center

- Joy Tsai MD, Massachusetts General Hospital, United States, Moderator
- Robert Adler MD, McGuire VA Medical Center, United States, Moderator

# [LB-1168] Long-term effects of calcium supplementation on abdominal aortic calcification in older women: analysis of a 5-year double-blind randomized controlled trial

September 23, 11:15 AM-11:30 AM

W414/Orange County Convention Center

#### [LB-1169] Treatment with zoledronic acid subsequent to treatment with denosumab

September 23, 11:30 AM-11:45 AM

W414/Orange County Convention Center

#### [LB-1170] Effect of denosumab on falls, muscle strength and function in community dwelling older adults

September 23, 11:45 AM-12:00 PM

W414/Orange County Convention Center

### **Late-Breaking Posters III**

September 23, 2019, 12:00 PM

West Hall C/Orange County Convention Center

All posters will be displayed in the ASBMR Discovery Hall from Saturday, September 21 through Monday, September 23. For a full listing of oral poster, poster and late-breaking poster presentations, please refer to the poster section of the onsite program book.

#### [LB MON-973] Free but not total 25hydroxyvitamin D is correlated with calcium absorption

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

#### [LB MON-979] Impact Microindentation Assesses Periosteal Bone Matrix Quality in Humans

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

# [LB MON-980] A Local Microstructure and Mechanical Properties Assessment By Volume Reduction of Human Vertebral Trabecular Bone Using HR-pQCT and FEA

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

# [LB MON-983] Glucocorticoids Decrease Longitudinal Bone Growth in Paediatric Kidney Transplant Recipients by Stimulating the FGF23/FGFR3 Signalling Pathway

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

# [LB MON-984] Developing an In Vitro Method to Identify the Biological Effect of Bone Marrow on Skeletal Acquisition for Children with Cerebral Palsy

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

#### [LB MON-989] In Vivo Role of M1 and M2 Macrophages at Genesis and Progress of Periapical Lesion

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

### [LB MON-990] Suppression of Heterotopic Ossification in Fibrodysplasia Ossificans Progressiva Models by an mTOR Signaling Modulator

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

#### [LB MON-998] TGFBR2/Noggin/BMP axis is essential for joint development and homeostasis

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

# [LB MON-999] Effects of carbon monoxide releasing molecule-3 on the expression of matrix metalloproteinases in rat condylar chondrocytes induced by interleukin-1β

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

### [LB MON-1006] PTH-induced phosphorylation of the transcriptional coregulator $\alpha$ NAC is required for optimal anabolic response

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

# [LB MON-1010] Material Properties of Trans-Iliac bone biopsies, as assessed by nanoindentation (NI), in patients with and without Atypical Femur Fractures (AFF) on long-term bisphosphonate (BP) Therapy for low bone density: A prospective nested case-controlled study

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

#### [LB MON-1015] Effects of Daily Palovarotene Versus KTI-2338 Administration on Skeletal Development in Wild-Type Mice

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

### [LB MON-1020] Transcriptional Factor NFATc1 Enriches a Migratory Stem Cell Population for Musculoskeletal Enveloping Tissues and the Bone

September 23, 12:00 PM-02:00 PM

#### [LB MON-1021] Regulation of bone growth and repair by the retinoic acid signaling pathway

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

### [LB MON-1022] The Correlation of Bone Bridge and Low Bone Mineral Density Measured by Quantitative Computed Tomography in Patients with Ankylosing Spondylitis

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

# [LB MON-1026] Identification of Gli1-interacting proteins during simvastatin-stimulated osteogenic differentiation of bone marrow mesenchymal stem cells

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

### [LB MON-1032] Sirtuin 6 in preosteoclasts suppresses age- and estrogen deficiency-related bone loss by stabilizing estrogen receptor $\alpha$

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

#### [LB MON-1039] miR-100 coordinates TGFβ and Wnt signaling in osteocyte mechanotransduction

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

### [LB MON-1040] Age-related suppression of osteocyte lacuna/canalicular networks, PLR gene expression, and pericellular fluid flow

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

#### [LB MON-1048] Dual Hip DXA. Is it time to change the Official Position of the ISCD?

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

# [LB MON-1049] Evaluation of the bone mineral density and cortical thickness of proximal femur by quantitative computed tomography (QCT) in hemodialysis patients

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

# [LB MON-1055] The risk and consequences of vertebral fracture in patients with Ankylosing Spondylitis from a linked health database

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

### [LB MON-1056] Secular Trends and Predictors of Hypovitaminosis D Across the Life Coursein Lebanese from a Large Laboratory Database

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

# [LB MON-1057] Prevalent Radiographic Vertebral Fracture and Abdominal Aortic Calcification Together May Improve Prediction of Incident Hip Fracture

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

### [LB MON-1058] Multimorbidity and long-term mortality following a specific fragility fracture: Latent class analysis of a nationwide population-based cohort

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

### [LB MON-1059] Trajectories to subsequent admissions and mortality following a specific fragility fracture: A nationwide population-based follow-up study

September 23, 12:00 PM-02:00 PM

### [LB MON-1060] Data mining approaches in the assessment of urinary and blood concentrations of chemical elements in the North American population and their association to bone mineral density loss.

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

#### [LB MON-1061] Targeting women with severe microstructural deterioration for treatment is cost effective

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

### [LB MON-1066] Acute Effects of Dietary or Supplemental Calcium on serum CTX levels in Post-Menopausal Women With High or Low Viceral Fat Levels.

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

#### [LB MON-1067] Role of Progranulin in Lactation-Induced Bone Loss

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

### [LB MON-1073] Effect of Denosumab compared with Bisphosphonate on fracture-healing in Japanese patients with fragility intertrochanteric fracture

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

#### [LB MON-1076] Adipose-derived stem cells: differetiation to parathoid hormone secreting cells

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

#### [LB MON-1079] Local administration of IL-1Ra as a strategy to enhance long bone healing

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

#### [LB MON-1087] Rmrp mutation disrupts chondrogenesis and bone ossification in zebrafish model of cartilagehair hypoplasia via enhanced Wnt/β-catenin signaling

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

### **Poster Session III**

September 23, 2019, 12:00 PM

West Hall C/Orange County Convention Center

All posters will be displayed in the ASBMR Discovery Hall from Saturday, September 21 through Monday, September 23. For a full listing of oral poster, poster and late-breaking poster presentations, please refer to the poster section of the onsite program book.

### [MON-16] Association of Full Metabolic Syndrome and its Components with T-score (spine) in Saudi Adults with Low Bone Mineral Density

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

# [MON-17] The Spot Urine Calcium:Creatinine Ratio Does Not Reliably Predict Hypercalciuria: A Cross-sectional Study

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

### [MON-18] The Effect of TransCon PTH, a Long-acting PTH (1-34) on Serum and Urine Phosphate in Healthy Subjects and Design of the PaTH Forward Phase 2 Trial

September 23, 12:00 PM-02:00 PM

# [MON-19] A single-center, retrospective chart review evaluating the accuracy of an operational definition of postoperative hypoparathyroidism used to query the Korean National Health Insurance Database

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

### [MON-20] Diagnostic Accuracy of Intraoperative Serum Parathyroid Hormone Testing to predict the result of Parathyroidectomy in secondary hyperparathyroidism in Chronic Kidney Disease

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

### [MON-21] Evaluation of Cortical Microarchitecture and Biomechanical Properties 6-12 Months after Atypical Femoral Fracture

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

### [MON-22] Relationship Between Serum Osteocalcin And Testosterone Secretion And Metabolic Factors In Male Idiopathic Hypogonadotropic Hypogonadism Patients

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

#### [MON-57] Obesity History Influences Bone Health Independently from Diet Composition, but Bone can be Improved with Moderate Intensity Aerobic Exercise Training

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

### [MON-58] The feasibility of high-resolution peripheral quantitative computed tomography (HR-pQCT) in patients with a suspected scaphoid fracture

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

#### [MON-59] Metacarpal diaphyses predict whole bone strength and porosity across bone sites

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

### [MON-60] Normalized FE-Predicted Failure Load With BMD: A Potentially Better Tool Than BMD Alone To Classify Osteoporotic Fragility Fracture Risk in Post-Menopausal Chinese Women

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

# [MON-61] Effects of Combination Mechanical Loading and Raloxifene Treatment on Bone Matrix Composition and Mechanical Properties

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

# [MON-62] Fatigue Life Variation in Secondary Osteonal Bone is Primarily Determined by Vascular Canal Diameter Rather Than Generalized Porosity

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

#### [MON-63] Attenuation of visible and near-infrared light signals in murine cortical bone

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

#### [MON-64] Effect of Microstructure on Indentation Fracture in Equine Cortical Bone

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

### [MON-65] Further analysis to investigate structural differences between femoral neck and trochanteric fracture cases

September 23, 12:00 PM-02:00 PM

# [MON-66] A Feasibility Study Using the Texture Research Imaging Platform (TRIP) to Assess Bone Texture on VFA Lateral Spine Images to Discriminate Vertebral Fracture: Application of a Modified TBS Algorithm

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

### [MON-67] Hind Limb Unloading-Induced Bone Loss Bears no Relationship with Bone Marrow Adipose Tissue in Thermoneutral Condition.

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

# [MON-68] New approaches for bone regeneration in Diabetes Mellitus: comparing MSC Cell Sheets and Collagen Membrane, associated or not with Photobiomodulation Therapy

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

#### [MON-69] Rat Bone Tissue Properties are Altered Due to In Vitro Sodium Fluoride Incubation

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

#### [MON-70] A Study of the Microstructure of the Femoral Head in Hip Fracture

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

### [MON-71] Presence of void space measured using HR-pQCT alters microarchitectural predictors associated with hip fracture risk

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

# [MON-72] Surface silver nanoparticle coating generates a galvanic redox system that promotes osseointegration of metal orthopedic implants

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

#### [MON-81] Increased burden of common risk alleles in children with a significant fracture history.

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

#### [MON-82] Hip structural analysis reveals impaired femoral neck geometry in youth with type 1 diabetes

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

### [MON-83] Whole Genome Sequencing of Saliva and Osteochondroma-derived DNA from Hereditary Multiple Exostoses (HME) families Reveals New Insights into Pathogenesis

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

#### [MON-111] Myosin 1a Regulates Osteoblast Differentiation Independent of Intestinal Calcium Transport

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

#### [MON-112] Muscle Trauma Activates Satellite Cells to Contribute to Ectopic Bone

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

#### [MON-113] Bone-derived Sclerostin Has Endocrine Actions in Adipocyte Precursors and Pancreatic Beta-Cells.

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

### [MON-114] DIFFERENCES IN CORTICAL FIBULA AND TIBIA STRUCTURE BETWEEN LONG-DISTANCE RUNNERS AND UNTRAINED CONTROLS. TOWARD A WIDER INSIGHT OF MECHANOSTAT FUNCTION

September 23, 12:00 PM-02:00 PM

#### [MON-115] Novel Macrophage Subpopulations at Tendon-Bone Interface after ACL Repair Surgery in Mice

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

### [MON-116] Skeletal muscle mitochondrial dysfunction and whole body metabolic alterations in the osteogenesis imperfecta murine (oim) model of Osteogenesis imperfecta (OI)

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

### [MON-117] Gut Microbiota has Osteoimmunomodulatory Effects on Alveolar Bone Independent of the Oral Microbiota

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

#### [MON-118] RANKL-signaling stimulates growth of testicular germ cell tumors

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

#### [MON-119] Defining the Role of ALK3 Over-Expression in Degenerative Disc Disease

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

### [MON-120] Using multi-omics to explore the role of gut microbiota in pathogenesis of postmenopausal bone health

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

### [MON-121] Bacteriophage-Derived Lysin Combination With Vancomycin Demonstrates Superior Antimicrobial Potential in Murine DAIR Model of PJI

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

### [MON-122] Changes in spinal bone density, back muscle size and visceral fat and their interaction following an 18-month multi-component exercise program in older men

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

#### [MON-123] Muscle Lamin A/C suppresses osteoclastogenesis by inhibiting muscle IL-6 expression

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

### [MON-132] STAT3 cooperates with MSX1 to drive osteoblast differentiation and regulates skeletal development of AD-HIES patients

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

# [MON-133] Reverse Phase Protein Array Reveals Differential Basal and Adaptive Protein Expression Profiles in BMSCs Cultured in Normoxic vs. Chronic Physiologically Relevant Bone Marrow Low Oxygen Conditions

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

### [MON-134] Sclerostin Antibody Treatment Rescues Negative Effects of Rosiglitazone on the Bone Marrow Niche

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

### [MON-161] Characterization of T Cell Suppression in the Bone Microenvironment for the Immunotherapy of Bone Metastases

September 23, 12:00 PM-02:00 PM

#### [MON-162] Human Breast Cancer Cell Lines Inhibit Osteoblast Mineralization

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

### [MON-163] Castration Determines the Efficacy of ETAR Blockade In a Mouse Model of Prostate Cancer Bone Metastasis

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

### [MON-164] IL-11 is Indispensable in Promoting Breast Cancer Metastasis Induced Osteolysis via Activation of Osteoclastogenesis Independently of RANKL

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

#### [MON-165] Unlocking Molecular Signatures of Osteosarcoma Subtypes using Trp53 mutated mouse models

September 23, 12:00 PM-02:00 PM

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#### [MON-166] The driver landscape of osteosarcoma metastasis

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

#### [MON-167] Syngeneic bone metastasis models for testing efficacy of novel therapies

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

#### [MON-168] Targeting Gli2 to Circumvent Anti-EGFR Therapeutic Resistance in Oral Squamous Cell Carcinoma

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

### [MON-169] Mesenchymal stem cells educated by cancer-cell secreted extracellular vesicles support breast cancer cell survival and immune surveillance

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

#### [MON-170] Effects of RANKL producing compared to non-RANKL producing tumors on muscle and bone.

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

### [MON-171] A pain-related neuropeptide calcitonin gene-related peptide promotes bone metastatic progression of prostate cancer through p38.

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

### [MON-172] MGUS plasma cells express senescence markers and targeting senescence may alleviate frailty in a mouse model of MGUS

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

#### [MON-173] Muscle RING-finger protein-1, a skeletal muscle wasting-related ligase, enhances malignancy via the activation of cancer stemness characteristics in bone tumors

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

# [MON-191] Zinc Finger Homeobox 4 (ZFHX4) Transcription Factor is a Novel Regulator of Chondrocyte and Osteoblast Differentiation and a Potential Mediator of Thyroid Hormone Effects on Endochondral Bone Formation

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

### [MON-192] Notch Signaling Is Involved in Age-Related Chondrocyte Migration Differences in an In-Vitro Model of Cartilage Healing

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

[MON-193] Functional analysis of a candidate causal gene of ossification of the posterior longitudinal ligament, CDC5L.

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

#### [MON-195] KDM6A promotes chondrogenic differentiation of dental stem cells

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

[MON-196] The beta-blocker propranolol increases physical activity in female mice after a posttraumatic knee injury

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

[MON-197] Prolyl Hydroxylase Domain-containing Protein 3 (Phd3) Gene Expressed in Chondrocytes is Not Essential for Skeletal Development in Mice

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

[MON-198] Effects of Implantation of a Scaffold Free 3D Mesenchymal Cell Structure Designed and Layered by a Bio 3D Printer for Knee Joints' Full Thickness Defects.

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

[MON-230] Reproducible Segmentation of the Fascia and Quantification of Muscle Fat Fraction in the Thigh

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

[MON-231] OPG Expression in Human Diabetic Bone Tissue and Cell Culture

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

[MON-232] The Phosphate Hypothesis: Beta Oxidation, a Principal Component of Metabolism

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

[MON-233] Deletion of the pro-adipogenic factor Zinc Finger Protein 467 (Zfp467), which induces high bone mass, protects mice from high fat diet-induced obesity

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

[MON-234] Bone-derived TGF-ß Impairs Glucose Metabolism and Insulin Release by Oxidation of

RyR2 Ca2+Release Channel in Pancreatic ß-cells in the Setting of High Bone Turnover, Aging and High Fat Diet

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

[MON-250] Transcriptome analysis reveals a somatic mutation in the catalytic domain of MAP2K1 in a melorheostosis patient.

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

[MON-251] Somatic HRAS Variant in a Parathyroid Adenoma, Squamous Cell Carcinoma, and Endomyocardial Membrane Expands the Phenotype of the Cutaneous Skeletal Hypophosphatemia Syndrome (CSHS)

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

[MON-252] FluoBoltTM-Periostin, a new Highly Sensitive Fluorescence Immunoassay for this Matricellular Protein based on Plasmonic Microtiter Plates

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

[MON-253] A large-Scale Deep-Coverage Whole Genome Sequencing to Identify Less Common and Rare Variants Associated with BMD and Fractures: The NHLBI Trans-Omics for Precision Medicine (TOPMED) Study September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

[MON-254] Metabolomic signatures among men and women with and without osteoporosis: The Boston Puerto Rican Osteoporosis Study

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

[MON-255] Molecular Mechanisms of Beta Blocker Association with Increased Bone Mineral Density in Humans September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

[MON-256] Tumor Necrosis Factor is involved in ossified ligamentum flavum in in thoracic ossification of the ligamentum flavum

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

[MON-276] Estrogen receptor alpha is involved in bone healing through regulating osteoblast maturation and angiogenesis

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

[MON-277] From bedside to the bench: a novel human homozygous IGF1R mutation is causal of abnormal skeletal acquisition

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

[MON-278] LA-PTH Prolonged Activity is Tolerant of Ligand Oxidation Despite a Contact Role for Methionine-8 Predicted by the Cryo-EM Structure of the PTHR1-LA-PTH Complex

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

[MON-279] Linking hepcidin, a key hormone for iron homeostasis, with Swedish mutant APP and inflammation associated osteoclastogenesis and bone-loss

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

[MON-280] Protein Phosphatases 1 and 2A are Necessary for PTH (1-34) Stimulation of Osteoblastic RANKL Expression Through CREB Regulated Transcription Coactivator 3

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

[MON-281] Impaired Hard Tissue Morphology and Mineral Density in Type-1 Diabetes

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

[MON-282] Thyroid Hormone Interacts with  $\alpha$ 2-adrenoceptor Signaling but not with  $\beta$ 2-adrenoceptor Signaling in Osteoblasts

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

[MON-283] Effect of PTH-stimulated bone resorptive activity is involved in IL-11/JAK/RANKL signaling pathway

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

[MON-284] Sex difference in rhBMP-2-mediated spinal posterolateral fusion in a rat mode

#### [MON-301] Interleukin-6 (IL6) Knockout Increases Bone Formation in Healing Stress Fractures

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

### [MON-302] Pre-Spaceflight Mechanical Conditioning Of Human Skeletal Stem Cells (hSSC) promotes Adipogenesis Resistance In Real Microgravity

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

#### [MON-303] Pb2+ Induced Differences in Bone Properties in Osteocalcin +/+ and -/- Female Mice

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

#### [MON-305] Gene Expression Response to Swim Training in Anosteocytic and Osteocytic Teleost Fish

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

#### [MON-306] Development of a Fluid Shear Stress Streamer for Live Cell Video Microscopy

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

### [MON-307] Perlecan deficiency impairs the intracellular calcium signaling in mechanically loaded bone and osteocytes

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

### [MON-308] Load-induced Regulation of Bone Neuro-mechanosensory Components in Healthy and Diabetic Mice

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

# [MON-328] Characterization of a rat model to evaluate current and future treatment strategies for hypoparathyroidism (hypoPTH).

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

### [MON-329] Functional Characterization of Four Mutations of the Calcium Sensing Receptor Gene Identified in Patients with Familial Hypocalciuric Hypercalcemia Type 1

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

### [MON-330] Intact mouse model to determine bioavailability of phosphorus from amino-acid based formulas with different mineral sources.

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

#### [MON-331] Intact FGF23 ELISA - a Novel Tool for the Accurate Measurement of iFGF23

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

#### [MON-332] Large-Scale Sequence Database Analyses Reveals 5 novel GNA11 mutations that alter Calcium-Sensing-Receptor Signalling: Relevance for FHH2 and ADH2

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

### [MON-333] Femoral bone quality in rats with glucocorticoid-induced osteoporosis after implantation of prednisolone pellet

September 23, 12:00 PM-02:00 PM

#### [MON-334] Chondrocyte Expression of Efnb1 Promotes Bony Union during Bone Fracture Repair

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

### [MON-335] Short-term Supplemental Dietary Potassium from Potato and Potassium Gluconate Effect on Calcium Retention and Urinary pH in Pre-Hypertensive-to-Hypertensive Adults

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

#### [MON-336] Functional Control of Osteoblasts by Type III Sodium/Phosphate Cotransporters

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

### [MON-347] The effect of age-related compositional changes on tissue-level bone mechanics is dependent on external bone size

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

### [MON-348] Characterization of Bone Microarchitecture and Facture Healing of Dystrophin-/-/utrophin+/- mice during aging

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

### [MON-349] Effects of Cocoa Supplementation on Muscle Function in Older Persons: Preliminary Results from a 3-month Pilot Randomized Controlled Trial

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

# [MON-350] Vitamin D deficiency resulted in deteriorated immobilization induced skeletal muscle atrophy via vitamin D receptor in Schwann cells.

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

### [MON-375] Severely Decreased Bone Formation in the Winnie Mouse Model of Inflammatory Bowel Disease (IBD)

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

#### [MON-376] Probiotics Ameliorate Bone Loss Induced by Gut-Microbiota in Hyperhomocysteinemia mice

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

#### [MON-377] Bioprinting Cells in Specific Arrangements Affects Bone Organoid Development

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

### [MON-378] 1,25-Dihydroxyvitamin D Induces Intracellular Calcium Rise in Normal Human Skeletal Muscle Myotubes via Phospholipase C-γ1

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

#### [MON-379] Patterns of bone mineral accretion in healthy term breastfed infants

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

### [MON-380] Hepcidin modulates runx2a gene expression through Bmp2a/Smad signaling pathways to regulate biomineralization of bone in zebrafish

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

# [MON-381] Functional validation of far upstream element binding protein 3 (FUBP3) in bone biology and osteoporosis susceptibility

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

### [MON-382] Corticocancellous bone regeneration using minimally polarized functional units: Mechanical and structural evaluation in rabbit calvarial defect and spinal fusion models

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

#### [MON-383] The intracortical vascular network and its modulation within intracortical BMUs in humans

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

# [MON-384] The Vitamin D- Vitamin D Receptor Axis Positively Regulates the Expression of Dystrobrevin Alpha During Murine Myogenic Differentiation

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

#### [MON-385] Minocycline-Induced Dysbiosis of Gut Microbiota Alters Normal Osteoimmune Processes in Post-Pubertal Skeletal Development

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

#### [MON-407] The Loss of ephrinB1 in Osteoprogenitors Delays Fracture Repair

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

#### [MON-408] The COP biology study: Exploring the physiology of circulating osteoprogenitor cells

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

# [MON-409] Temporal Transcriptomic Differences Define Sexual Dimorphism in Murine Post Natal Bone Homeostasis and Aging

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

### [MON-410] Effects of Advanced Glycation End Products, High Glucose, and Insulin-like Growth Factor-I on Myoblastic Differentiation and Apoptosis in C2C12 Cells

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

#### [MON-411] The effects of DNA nanomaterials on adipose-derived stem cells via DNA methylation

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

#### [MON-412] αSMA periosteal cells contribute to the increase in osteoblast numbers in response to load

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

#### [MON-414] Identification of Gli1 as a progenitor cell marker for meniscus injury repair

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

### [MON-415] Hypoxia Reduces Hematopoietic Cells Present During Ex Vivo Expansion of Bone Marrow Stromal Cells and Improves Adenoviral Transduction

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

### [MON-416] PIP5k1β controls bone homeostasis through modulating both osteoclast and osteoblast differentiation

September 23, 12:00 PM-02:00 PM

#### [MON-433] Large increase of BMP-7 in early axial spondyloarthritis

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

#### [MON-434] A Novel Regulatory Role of TRAPPC9 in In Inflammatory Chondrocytes and Osteoarthritis

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

# [MON-435] Blocking of CCL2-CCR2 axis Suppress articular chondrocyte hypertrophy, inflammatory response and osteoarthritis progression in MIA induced Osteoarthritis using soluble CCR2 gene therapy

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

### [MON-436] Investigation of the Relationship Between Inflammation and Calcification in the Tibiofemoral Joint for the Early Prediction of Knee Osteoarthritis

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

#### [MON-437] Metformin, AMP

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

#### [MON-438] The Regulatory Role of EGFR Signaling in Adult Cartilage Homeostasis and Osteoarthritis

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

### [MON-439] Articular cartilage degradation associated with aberrant subchondral bone remodeling in patients with osteoporotic osteoarthritis

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

#### [MON-483] Epigenetic Control of Osteoblast Differentiation by Chromobox 3 (Cbx3) Protein.

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

### [MON-484] Kalirin regulates bone mass through effects on osteoblast activity, osteocyte morphology and intercellular communication.

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

# [MON-485] Dipeptidyl Peptidase 4 Effect and its Inhibition by Vildagliptin, on Osteogenic and Adipogenic Differentiation ff Human Mesenchymal Stem Cells

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

### [MON-486] Activation of Nox4 is not required for OVX-induced osteoblast senescence and bone loss in mice

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

### [MON-487] PTH Stimulates RANKL and Inhibits OPG in Primary Murine Osteoblasts via a CaMKK/Calcineurin/Nfat Pathway Independent of cAMP/PKA

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

# [MON-488] Conditional Activation of NF-κB Inducing Kinase (NIK) in the Osteolineage Enhances both Basal and Loading-Induced Bone Formation

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

### [MON-489] Acceleration of bone formation and suppression of bone resorption by soluble Frizzled2 receptor in mice

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

[MON-490] Deletion of the ER stress sensor Ire1a, but not Perk, in the osteoblast lineage decreases bone mass.

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

[MON-491] Neuromedin-U (NMU) negatively regulates bone remodeling

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

[MON-492] Screening for Small Molecules That Bind to the BMPR1A: An In Silico Computational Analysis

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

[MON-493] The Vitamin C Dependent Epigenetic Regulator Hairless Controls Bone Development and

Osteoblast Differentiation

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

[MON-494] Osteoblast-specific overexpression of Gαs and Gαq/11 leads to differential fracture healing responses

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

[MON-495] Targeting a newly identified IncRNA and its interaction with HuR to promote osteogenic cells migration to bone formation surface for reversing established age-related osteoporosis

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

[MON-496] A long noncoding RNA regulatory mechanism of osteoblast proliferation

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

[MON-497] A Short Peptide within the Pigment Epithelium Derived Factor that Binds to the Receptor Promotes Human Mesenchymal Stem Cell Differentiation and Matrix Mineralization

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

[MON-498] Glutaminase is necessary and sufficient for preosteoblast differentiation and bone formation

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

[MON-499] Glutamine uptake through Slc7a7/y+LAT1 is required for WNT induced osteoblast differentiation.

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

[MON-500] Activation of Mitochondrial Respiration is an Early Akt-dependent Step in Osteoblast Differentiation Induced by Various Osteogenic Factors

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

[MON-501] The effect of SNP rs2887571 (located in an estrogen receptorα binding site) on WNT5B function in bone

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

[MON-502] Increased bone mass in female mice lacking mitofusin-2 (Mfn2) in osteoprogenitors

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

[MON-503] Canonical Notch signaling intersects with Runx2 to promote human osteoblast differentiation

### [MON-541] Osteoprotective Neuropilin-1 (Nrp-1) Signaling in Immunosuppressive Regulatory T cells (TREG) is a Potential Target of Orthopedic Particle-induced Inflammatory Osteolysis

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

# [MON-542] Impact on the clinical and osteoclastic phenotypes of a rare variant in the DOCK6 gene in familial forms of Paget's disease linked to the p. Pro392Leu mutation in the SQSTM1 gene.

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

#### [MON-543] The role of NLRP12 attenuating apical periodontitis development

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

#### [MON-544] Acyloxyacyl Hydrolase (Aoah)-deficiency promotes osteoclast function and bone resorption

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

### [MON-546] MEP50 Suppresses Osteoclast Differentiation Which Effect is Released Through Direct Interaction with the Osteoclast Transcription Factor C/EBPα

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

#### [MON-547] USP34 Controls Osteoclast Differentiation by Regulating NF-kB Signaling

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

#### [MON-548] DAG levels differentially modulate osteoclast versus macrophage functions

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

#### [MON-549] Histochemical evidence of the presence of osteoclast-like cells in Rankl-/- mice

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

#### [MON-550] Proteolysis of M-CSF receptor promotes the differentiation of osteoclasts and arthritic bone erosion

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

#### [MON-551] OFS, Novel Sentinel Imaging Probes for Early Diagnosis of Periodontitis

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

#### [MON-552] Lycorine protects mice from inflammatory bone loss via decreasing autophagy

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

#### [MON-553] Staphylococcus aureus Infects Osteoclasts and Replicates Intracellularly

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

#### [MON-554] ATF3/7 Transcriptionally Regulate the Expression of Cthrc1 in Osteoclasts

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

#### [MON-555] Inhibitory action of IL-3 on osteoclast differentiation is conserved in mice, human and rats.

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

#### [MON-556] Dpy30 regulates RANKL-mediated osteoclastogenesis

September 23, 12:00 PM-02:00 PM

#### [MON-579] DOCK7 Deletion Diminishes Bone Material Properties and Osteocytes Dendrite Morphologies

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

#### [MON-580] Connexin 43 Deficiency in Osteocytes Attenuates Cortical Bone Loss from Unloading

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

#### [MON-581] Osteocytic Connexin 43 Channels Affect Fracture Healing

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

### [MON-582] Deletion of Sphingosine Phosphate Lyase 1 (Sgpl1) in Osteocytes reduces lacunar size and prevents aging and OVX-induced bone loss in mice

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

#### [MON-583] Osteocyte Transcriptome Dysregulation in Two Mouse Models of Osteogenesis Imperfecta

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

#### [MON-584] Osteocyte Dysfunction Alters Systemic Bone Loss After Fracture

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

#### [MON-585] Osteoblast-to-Osteocyte Differentiation via Stacking Demineralized Bone Slices

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

#### [MON-586] Examination of optimal culture condition of bone marrow cells on β-TCP / RCP hybrid scaffold.

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

### [MON-587] Overlapping properties and functions of matrix vesicles and exosomes/extracellular vesicles in bone cells

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

#### [MON-588] Morphologic and Molecular Equivalence of Osteocytes in Biomimetic Hydrogels

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

#### [MON-617] Treatments of Osteoporosis Increase Bone Material Strength index in Patients with low Bone Mass

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

### [MON-618] Individuals with Central Fractures have More Prevalent Vertebral Fractures, Lower Trabecular Bone Score and Lower BMD than Individuals with Peripheral Fractures: a Sub-study of NoFRACT

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

#### [MON-619] Study on vitamin D deficiency in Japan: relationship to age, gender, and bone mineral density

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

#### [MON-620] 3D-DXA measurements in lumbar spine in patients with vertebral fractures.

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

#### [MON-621] Trend Towards Loss of Bone Microarchitecture Assessed by Trabecular Bone Score in

#### Postmenopausal Women on Exemestane Therapy: Secondary Analysis Of A RCT

September 23, 12:00 PM-02:00 PM

# [MON-622] Follicle-stimulating Hormone And Estradiol Are Associated With Bone Mineral Densities And Risk Of Fractures In Men With Type 2 Diabetes Mellitus

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

#### [MON-623] Orthopedic Bone Health Optimization

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

### [MON-624] Association between osteoporosis-related vertebral fractures and DXA-derived 3D measurements at lumbar spine

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

# [MON-625] Spinal curvature assessed by a computer-assisted device and anthropometric indicators are useful in discriminating vertebral fractures among individuals with back pain

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

### [MON-626] FRAX without BMD predicts treatment recommendations for Veterans who recently sustained a low trauma non-vertebral/non-hip fracture

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

#### [MON-627] Osteocalcin and its Forms Across the Adult Male Lifespan

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

### [MON-628] Analysis of 2D-DXA image by 3D-SHAPERTM gives additional information for the treatment with denosumab in post-kidney transplant recipients.

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

### [MON-629] Image validation of Spectral analysis filters on femoral bone with DECT: An Ex-vivo Study on Human Femur

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

# [MON-630] Intrasite short-term precision in first and second generation HR-pQCT scanners assessed using phantoms and repeated scans in adults with osteogenesis imperfecta

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

#### [MON-669] THE NATIONAL TREATMENT GAP IN SECONDARY FRACTURE PREVENTION IN DENMARK 2005-2014: INDIVIDUAL PATIENT DATA INCLUDING BOTH HOSPITAL ADMINISTERED AND ALL PRESCRIBED ANTI OSTEOPOROSIS MEDICATIONS

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

#### [MON-670] Relationship between vitamin D, parathyroid hormone and bone health in Myanmar subjects

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

#### [MON-671] Disease Burden of Osteoporosis and Other NCDs in Lebanon

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

#### [MON-672] Serum Pentosidine in Women in the Canadian Multicentre Osteoporosis Study

September 23, 12:00 PM-02:00 PM

### [MON-673] Development and Validation of a Risk Score to Predict the First Hip Fracture in the Oldest Old: Retrospective Cohort Studies

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

### [MON-674] Incident Fractures and Locations of Subsequent Fractures in Postmenopausal Women: The Women's Health Initiative Observational Study

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

#### [MON-675] Effect of Fractures on Overall Survival in Cancer Patients: The NHANES database

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

#### [MON-677] Comorbid illnesses and reduced GFR predict fractures in patients with diabetes in an ethnicspecific manner

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

#### [MON-678] The Effect of Marital Status on Risk Factors for Fracture and the Risk of Hip Fracture in Sweden

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

#### [MON-679] Mortality Following Fragility Fracture in an Eastern Regional Hospital in Singapore

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

### [MON-680] Association of Beta Blocker Use and Bone Mineral Density using the Framingham Osteoporosis Study: Effects of Dose, Duration, and Drug

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

#### [MON-681] Difference of Clinical Outcomes after Fracture Hospitalization between Elderly Men and Women

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

### [MON-682] Nitrogen-containing Bisphosphonates Are Associated with Reduced Risk of Pneumonia in Patients with Hip Fracture: A Population-based Cohort Study.

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

### [MON-683] Skin autofluorescence, a non-invasive biomarker for advanced glycation end-products, is associated with prevalent vertebral and major osteoporotic fractures: The Rotterdam study

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

### [MON-684] Derivation and External Validation of the Lower Limit of Normal Values' Predictive Ability for Future Fracture in African-American Women

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

### [MON-685] Incidence of osteoporotic refractures and associated mortality in Korea using Nationwideclaims data

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

#### [MON-686] Circulating Protein Biomarkers for Osteoporosis: Results from a Mendelian Randomization Study

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

# [MON-700] Current Practices in Osteoporosis Identification and Treatment in Geriatric Hip Fractures at a Tertiary Care Hospital in Pakistan: A Case Series

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

#### [MON-701] Baseline secondary fracture prevention in three Health Systems in Mexico: The FLS-Mx Inter-Institutional Group

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

### [MON-702] Assessing Hip Surgery Outcomes in the State of Texas: Are Outcomes Equal Across Race and Ethnicity

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

### [MON-703] Perception of severe osteoporosis amongst medical doctors in South Korea: Awareness, impact, and treatment

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

### [MON-704] Why patients with a recent fracture do not attend the FLS: a Home visit study among non-responders to FLS invitation.

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

### [MON-705] Implementing an Osteoporosis Program into Your Practice, Hospital, or Organization: What Works and What Doesn't Work

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

#### [MON-721] Bovine Colostrum Supplementation and Bone Health: a Pilot Study

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

# [MON-722] Effect of Adiposity on Change in 25(OH) Vitamin D and Free Vitamin D Levels in the VITamin D and OmegA-3 Fatty Acid TriaL (VITAL)

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

### [MON-723] A Study on the Effect of the Physical Fitness Test in Adolescence on Bone Mass in Korean Young Adults

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

#### [MON-724] Evaluating the Changes and Side-to-Side Differences in Bone Index of Japanese Male Long-Distance Runners

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

# [MON-725] Effect of Maitake Mushroom Intake on Vitamin D Status During the Winter Season in Japanese Young Women

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

### [MON-726] The Dietary Approaches to Stop Hypertension (DASH) index is associated with a lower odds of osteoporosis in adults aged 50 y and older

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

### [MON-727] Bone mass, free 25(OH) vitamin D, oxidized and non-oxidized PTH in young women 3 years after intensive nutrition therapy for severe anorexia nervosa

September 23, 12:00 PM-02:00 PM

### [MON-734] Serum Bone-Derived Extracellular Vesicles are associated with Bone Loss with Antiretroviral Therapy in adults with HIV

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

# [MON-735] Mineral Maturity / Crystallinity at forming trabecular surfaces and its potential role in the bone mineral loss evident in postmenopausal osteoporosis

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

#### [MON-736] Wnt Signaling and Bone Fragility in Elderly Postmenopausal Women with Type 2 Diabetes

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

# [MON-755] Association between plasma sodium and bone disease in patients with chronic heart failure: a prospective cohort study:

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

#### [MON-756] Biological and non-Biological Therapies and Lumbar Spine Bone Loss in Rheumatoid Arthritis

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

### [MON-757] Comparison of Fracture Prediction Tools in Individuals without and with Chronic Kidney Disease: A Population-Based Analysis of CARTaGENE

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

#### [MON-758] Obesity Protects Patients with Rheumatoid Arthritis from Systemic Bone Losing During Anti-TNF Treatment

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

#### [MON-759] Bone Turnover Markers Do Not Predict Fracture Risk in Type 2 Diabetes

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

### [MON-760] Association between renal function and bone turnover or bone microstructure: An HR-pQCT study in healthy Japanese women

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

### [MON-761] Teriparatide Once Weekly Efficacy Research for Glucocorticoid-induced Osteoporosis: The TOWER-GO study

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

#### [MON-762] Changes in femoral cortical and trabecular bone after bariatric surgery

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

# [MON-802] Prospective Observational Study to Describe Characteristics and Management of Postmenopausal Women with Osteoporosis Treated with Prolia® in France and its use in Routine Clinical Practice (The PILOTE Study)

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

# [MON-803] ARB may augment effects of anti-resorptive medications in osteoporotic bone of older women with hypertension: a preliminary study

September 23, 12:00 PM-02:00 PM

### [MON-804] PRospective Observational Study in REal Life Treatment in LatinAmerican Patients with Denosumb Query Database (ROSELA DataBase): Preliminary Report

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

#### [MON-805] Factors associated with improved readiness for adopting osteoporosis treatment

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

### [MON-806] Novel VEGF loaded Fibrinogen-Aptamer functionalized hydrogel improves osteogenesis and angiogenesis

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

#### [MON-807] Whole Body Vibration moderates MGUS-associated Bone Disease in Humans

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

### [MON-808] Goal-Directed Treatment of Osteoporosis in Patients with Rheumatoid Arthritis Using Denosumab for Three Years from Japanese Multicenter Study

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

#### [MON-809] Once-weekly teriparatide reduces serum sclerostin levels in osteoporosis patients.

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

#### [MON-810] Comparison of the Efficacy of Denosumab and Zoledronic Acid in Postmenopausal Women

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

# [MON-811] Surgical results of osteoporotic vertebral fracture causing thoracic myelopathy combined with ossification of the ligamentum flavum at the same level

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

### [MON-812] Modelling Site-specific Time Trends of Bone Density during Teriparatide Therapy – Can they Define a Shorter Effective Duration of Treatment?

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

### [MON-813] Study of the effect of educational intervention on compliance and fracture rates in elder female patients with osteoporosis

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

### [MON-814] Hormone therapy decreases the risk of fracture both in fallers and non-fallers – data from the combined Women's Health Initiative Hormone Therapy Trials

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

### [MON-815] Reversal of serum cystatin C-based eGFR decline by decreased phosphate release from bone by denosumab in osteoporotic patients even at non-CKD stage

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

### [MON-816] Anti-myostatin and anti-activin A antibody treatment improves bone strength and microarchitecture in C57BL6J mice.

September 23, 12:00 PM-02:00 PM

#### [MON-817] An osteoporosis course for patients presented by students at health-related study programmes.

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

### [MON-818] Development of a bone-targeted orally bioavailable osteogenic oxysterol for the treatment of osteoporosis

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

### [MON-819] The Optimal Loading and Maintenance Dose of Vitamin D2 for Treatment of Hypovitaminosis D in Adults: A Randomized, Double-Blinded, Dose-Comparison Study

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

### [MON-820] The role of exosomal miR-214-3p in mechanical load-induced improvement of angiogenesis in a mouse model of postmenopausal osteoporosis

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

### [MON-829] Extracellular vesicles (EVs) derived from osteotropic tumors inhibit osteoblast differentiation and increase osteoclastogenesis and angiogenesis.

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

#### [MON-830] Functional Role of Nuclear PTHrP in Breast and Breast Cancer Cells In Vitro and In Vivo

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

### [MON-831] Primary Cilia Mediates PTHrP-dependent Prosurvival Actions on Bone cells via Hedgehog Signaling Pathway

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

#### [MON-832] BMP9 Regulates Bone Metabolism By Promoting Bone Formation And Inhibiting Bone Resorption

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

# [MON-857] Elevating Circulating 25-Hydroxyvitamin D Levels Through Dietary Supplementation Improves Bone Volume and Mineral Density in HYP Mice

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

#### [MON-858] Genetic Inactivation of Sclerostin in a Mouse Model of Osteogenesis Imperfecta

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

#### [MON-860] Collagen XII as a maintenance factor for anterior cruciate ligament

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

### [MON-861] Indoleamine 2,3-dioxygenase Knockout Mice are Only Partially Protected Against Orchiectomy Related Bone Loss

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

### [MON-862] Montmorency Tart Cherry Supplementation and Exercise Differentially Affect Bone

Microarchitecture and Metabolism with Age

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

#### [MON-864] Systemic alterations due to estrogen deficiency in a senile osteoporotic rat model

# [MON-865] Design and in vivo testing of novel bisphosphonate-fluoroquinolone conjugates chemisorbed to bone graft material

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

### [MON-866] Characterization of Changes in Bone Microarchitecture and Bone Turnover after Splenectomy in a Thalassemia Mouse Model

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

### [MON-867] Female mice exhibit a reduced diabetic response to streptozotocin compared to male mice and do not lose bone.

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

### [MON-868] Bodyweight-Supported Treadmill Training and Passive Cycle Training Produce Differential Effects on Cancellous Bone Loss in Spinal Cord Injured Rats

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

# [MON-883] Inhibition of Sclerostin by Sclerostin Antibody Does Not Affect Morphological or Transcriptional Endpoints Related to Atheroprogression, Plaque Calcification, or Inflammation in 2 Murine Models of Atherosclerosis

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

### [MON-884] Long-term Suppression of Trabecular Bone Resorption with a Low HA-Binding Affinity Bisphosphonate Reverses Rapidly when Treatment Ceases

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

#### [MON-885] Abaloparatide: Infusion Causes the Same Catabolic Bone Loss in Mice as PTH (1-34)

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

### [MON-886] Morphine Treatment Reduces Trabecular Bone Volume Fraction and Impairs Cortical Bone Expansion in Male Mice

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

#### [MON-887] Royal Jelly Does Not Prevent Bone Loss But Improves Bone Strength in Ovariectomized Rats

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

# [MON-888] Effects of Graded Increases in Ethanol Consumption on Biochemical Markers of Bone Turnover in Young Adult Male and Female Cynomolgus Macaques

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

### [MON-889] Long-term osteoblast-specific Plekho1 silencing by RNA interference prevents bone formation reduction during aging in safety in both genders

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

#### [MON-908] Impaired Cognitive Function in Normocalcemic Primary Hyperparathyroidism

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

#### [MON-909] Clinical Burden in Adults with Pediatric-Onset Hypophosphatasia: a Retrospective Chart Review

### [MON-910] The Burden of Chronic Hypoparathyroidism in Canada: A Retrospective Study Using the ICES Database

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

### [MON-911] Biomarker Profiles in PLS3 and WNT1 Osteoporosis – Elevated Serum DKK1 in Abnormal PLS3 Function

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

#### [MON-912] A COL10A1 Frameshift Mutation in a Patient with Features of Cleidocranial Dysplasia

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

### [MON-913] Open-label, Multicenter, Pilot Study of Interferon Gamma – 1b in Patients with Autosomal Dominant Osteopetrosis type 2 (ADO2)

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

# [MON-914] BONE MINERAL DENSITY AND 3D-DXA ASSESSMENT IN ADULT PATIENTS WITH A POSITIVE AND NEGATIVE GENETICAL TESTING FOR HYPOPHOSPHATASIA COMPARED WITH A HEALTHY CONTROL GROUP.

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

### [MON-939] Inhibition of Activin A does not ameliorate the formation of trauma-induced Heterotopic Ossification.

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

### [MON-940] Induction of Cherubism-like Jawbone Expansion in Mice Reveals Unrecognized Contributions of Neutrophils to Cherubism Pathogenesis

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

#### [MON-941] X-linked Hypophosphataemia: Prevalence and Mortality Within the United Kingdom

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

### [MON-942] Identification of FGFR3 Inhibitors from Plant Extracts with Therapeutic Potential for FGFR3-Activated Diseases

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

# [MON-943] IFT80 deficiency in type II collagen positive progenitors causes JATD via impaired hedgehog signaling

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

### [MON-944] In Vitro Signaling Characteristics and Dosing Evaluation of Vosoritide, a CNP-Variant for the Treatment of Achondroplasia

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

#### [MON-945] Young Adult Male and Female +/G610C Mice as an Animal Model of Osteogenesis Imperfecta

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

#### [MON-946] NFAM1 Stimulation of Osteoclast Differentiation in Paget's Disease of Bone

# [MON-947] Activin-A induces fewer, but larger, osteoclasts from CD14+ monocytes in both healthy controls and fibrodysplasia ossificans progressiva patients

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

# [MON-948] Sphingomyelin Synthase 2 Mutation Arg50\* Causes Autosomal Dominant Osteoporosis With "Doughnut" Lesions Of The Skull (OMIM %126550) In A Multigenerational American Kindred

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

#### [MON-949] Genotype-Phenotype Correlation In McCune-Albright Syndrome

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

#### [MON-964] Muscle health, postural stability and quality of life in vitamin D insufficient healthy women: a crosssectional comparison of the effects of elevated parathyroid levels

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

#### [MON-965] Sarcopenia Is Widespread In Females With Anorexia Nervosa But Exercise Is Not Protective

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

### [MON-966] Vitamin D Supplementation is Detrimental to Muscle Strength Recovery in Graves' Disease

#### Hyperthyroidism. A Randomized Clinical Trial

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

#### [MON-967] Establishing Potential Jump Power Cut-Off Values for Sarcopenia

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

### [MON-968] Higher pulsatility index is associated with loss of grip strength and gait speed over time: the Framingham Heart Study

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

#### [MON-969] Markers of Sarcopenia and Incident Mobility Limitation: The Tobago Longitudinal Study of Aging

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

#### [MON-970] Low Agreement Between DXA-Based Low Skeletal Muscle Mass Indicators

September 23, 12:00 PM-02:00 PM

West Hall C/Orange County Convention Center

### **Oral Poster Session III: Basic & Translational**

September 23, 2019, 12:15 PM

West Hall C/Orange County Convention Center

New this year! Come hear a select number of plenary poster presenters give an overview of their poster on digital touch screen displays. Following the oral poster presentations, visit their poster board to ask questions and continue the discussion.

### [FRI-558] PPARγ Regulation of Osteocyte Fuel Dependency and Capacity Contributes to the Balance of Systemic Energy Metabolism

September 23, 12:15 PM-12:20 PM

#### [FRI-440] Truncating Mutations in Recql4 Cause a Low Bone Mass Phenotype, but Not Osteosarcoma

September 23, 12:20 PM-12:25 PM

West Hall C/Orange County Convention Center

#### [FRI-559] Osteocyte Oxidative Stress Following Estrogen Loss, Microdamage and Disuse

September 23, 12:25 PM-12:30 PM

West Hall C/Orange County Convention Center

#### [FRI-560] Mechanical Loading Reduces the Adverse Effects of Fatty Acid Overload on Osteocytes

September 23, 12:30 PM-12:35 PM

West Hall C/Orange County Convention Center

### [FRI-454] The Constitutive Photomorphogenesis 9 (COP9) Signalosome (CSN) Complex is Required for Proper Postnatal Skeletal Growth

September 23, 12:35 PM-12:40 PM

West Hall C/Orange County Convention Center

#### [FRI-833] Insights from Lexicon Pharmaceuticals' Genome5000™ Mouse Gene Knockout Campaign

September 23, 12:40 PM-12:45 PM

West Hall C/Orange County Convention Center

#### [FRI-836] The SH3BP2-SYK Axis Regulates Alveolar Bone Loss in a Mouse Model for Periodontitis

September 23, 12:45 PM-12:50 PM

West Hall C/Orange County Convention Center

#### [FRI-237] Leveraging Unconfounded Genetic Risk Scores to Stratify Fracture Risk by Age at Onset

September 23, 12:50 PM-12:55 PM

West Hall C/Orange County Convention Center

#### [FRI-840] CaMKK2-AMPK-p38 MAPK Axis in Osteoarthritis

September 23, 12:55 PM-01:00 PM

West Hall C/Orange County Convention Center

#### [FRI-844] OI fractures show delayed healing and increased possibility of re-fracture in murine models

September 23, 01:00 PM-01:05 PM

West Hall C/Orange County Convention Center

### **Oral Poster Session III: Clinical**

September 23, 2019, 12:15 PM

West Hall C/Orange County Convention Center

New this year! Come hear a select number of plenary poster presenters give an overview of their poster on digital touch screen displays. Following the oral poster presentations, visit their poster board to ask questions and continue the discussion.

# [FRI-706] The Effect of Exercise or Bisphosphonate Use on Bone Density and Microarchitecture among Postmenopausal Women with Low Bone Mass Experiencing Modest Weight Loss

September 23, 12:15 PM-12:20 PM

West Hall C/Orange County Convention Center

# [FRI-769] Osteosarcoma Surveillance Program Using Real World Data from US Pharmacy Claims Linked to State Cancer Registry Data to Estimate the Incidence of Osteosarcoma Among Patients Treated with Teriparatide (Forteo)

September 23, 12:20 PM-12:25 PM

West Hall C/Orange County Convention Center

### [FRI-766] Modeling-based Bone Formation Persists in the Femoral Neck Despite Remodeling Inhibition in Subjects Treated with Denosumab

September 23, 12:25 PM-12:30 PM

#### [FRI-707] Evaluating the Relationship Between Physical Activity Level and Bone Structure: a pQCT Analysis

September 23, 12:30 PM-12:35 PM

West Hall C/Orange County Convention Center

#### [FRI-640] The Risk of Hip and Non-Vertebral Fractures in Parkinson's Disease: A Systematic Review and Meta-Analysis

September 23, 12:35 PM-12:40 PM

West Hall C/Orange County Convention Center

### [FRI-710] A comparison of DXA-derived bone responses to impact versus resistance training in young adult women: The OPTIMA-Ex trial.

September 23, 12:40 PM-12:45 PM

West Hall C/Orange County Convention Center

#### [FRI-771] Denosumab 10 Year Simulation of Bone Remodeling In Human Biopsies

September 23, 12:45 PM-12:50 PM

West Hall C/Orange County Convention Center

### [FRI-774] Is severely suppressed bone turnover in patients on long term bisphosphonate treatment causally related atypical femoral fracture?

September 23, 12:50 PM-12:55 PM

West Hall C/Orange County Convention Center

#### [FRI-776] Risk predictors for seniors at imminent risk of fracture

September 23, 12:55 PM-01:00 PM

West Hall C/Orange County Convention Center

### [FRI-778] Study of Twice-Weekly Injections of Teriparatide by Comparing Efficacy with Once-Weekly Injections in Osteoporosis Patients: The TWICE Study

September 23, 01:00 PM-01:05 PM

West Hall C/Orange County Convention Center

### **Concurrent Orals: Clock and Cytokines Regulation**

September 23, 2019, 02:00 PM

W314/Orange County Convention Center

Luigi Gennari MD, PhD, University of Siena, Italy, Moderator

### [1139] Disruption of the Biological Clock Reduces Bone Turnover and Alters Trabecular Architecture and Mineralization

September 23, 02:00 PM-02:15 PM

W314/Orange County Convention Center

#### [1140] Diurnal Changes in Serum Levels of Bone-Related Circulating MicroRNAs

September 23, 02:15 PM-02:30 PM

W314/Orange County Convention Center

### [1141] Circadian Rhythm Disruption in Combination with High-Fat Diet alters Glycemic Control and impair Bone Health

September 23, 02:30 PM-02:45 PM

W314/Orange County Convention Center

# [1142] Leukemia cells activate the immune response and seize serotonin signaling in osteoblasts to engraft and proliferate

September 23, 02:45 PM-03:00 PM

W314/Orange County Convention Center

### [1143] Differential Signaling between CXCL12 and its Cryptic Bioactive DPP4-Cleaved Isoform Alters Osteogenic Pathways Explaining Complexity of CXCL12 Actions

September 23, 03:00 PM-03:15 PM W314/Orange County Convention Center

### **Concurrent Orals: Mechanobiology and Muscle Interactions**

September 23, 2019, 02:00 PM

W315/Orange County Convention Center

• Benjamin Levi MD, University of Michigan, United States, Moderator

[1144] Gambogic amide augments skeletal adaptation to mechanical loading through actions on both sensory nerves and osteoblasts

September 23, 02:00 PM-02:15 PM

W315/Orange County Convention Center

[1145] Increased Expression of FGF21 from Dystrophic Skeletal Muscle Negatively Affects Bone Homeostasis in Dystrophic Mice

September 23, 02:15 PM-02:30 PM

W315/Orange County Convention Center

[1146] Irisin Directly Regulates Osteoclastogenesis via  $\alpha V$  Integrin Receptors In Vitro and In Vivo

September 23, 02:30 PM-02:45 PM

W315/Orange County Convention Center

[1147] Interleukin-6 must signal in osteoblasts to favor adaptation to exercise

September 23, 02:45 PM-03:00 PM

W315/Orange County Convention Center

[1148] Wnts produced by osteo-lineage cells are required for loading-induced bone formation in mice

September 23, 03:00 PM-03:15 PM

W315/Orange County Convention Center

### **Concurrent Orals: Osteoclasts**

September 23, 2019, 02:00 PM

W414/Orange County Convention Center

• Gabriel Mbalaviele PhD, Washington University in St. Louis School of Medicine, United States, Moderator

[1149] Molecular and cellular analyses of BMP-dependent coupling signals between osteoclasts and osteoblasts during bone remodeling

September 23, 02:00 PM-02:15 PM

W414/Orange County Convention Center

[1150] Diversity in Inflammatory Osteoclasts Contributes to the Modulation of Their Inflammatory Effect and Resorptive Function

September 23, 02:15 PM-02:30 PM

W414/Orange County Convention Center

[1151] Osteoprotegerin Requires Heparan Sulfate for Its Anti-osteoclastogenic Activity

September 23, 02:30 PM-02:45 PM

W414/Orange County Convention Center

[1152] Aging and menopause reprogram osteoclast precursors for aggressive bone resorption

September 23, 02:45 PM-03:00 PM

W414/Orange County Convention Center

[1153] Glycosylation of immunoglobulins determine bone loss in multiple myeloma

September 23, 03:00 PM-03:15 PM

W414/Orange County Convention Center

### **Concurrent Orals: Osteoporotic Fracture Prediction**

September 23, 2019, 02:00 PM

Valencia Ballroom A/Orange County Convention Center

· Nicole Wright PhD, University of Alabama at Birmingham, United States, Moderator

[1154] Subsequent Fracture Risk Following Traumatic versus Non-traumatic Fracture: A Registry-Based Cohort Study

September 23, 02:00 PM-02:15 PM

Valencia Ballroom A/Orange County Convention Center

[1155] Grade 1 vertebral fractures identified by densitometric lateral spine imaging predict incident fracture independently of clinical risk factors and BMD in older women

September 23, 02:15 PM-02:30 PM

Valencia Ballroom A/Orange County Convention Center

[1156] Site-specific prediction of fractures by BMD and bone microarchitecture in older women and men: The Bone Microarchitecture International Consortium (BoMIC)

September 23, 02:30 PM-02:45 PM

Valencia Ballroom A/Orange County Convention Center

[1157] Total Volumetric BMD at the Radius Is Associated with Major Osteoporotic Fractures Independently of Clinical Risk Factors and Femoral Neck BMD in Older Women

September 23, 02:45 PM-03:00 PM

Valencia Ballroom A/Orange County Convention Center

[1158] Time Since Prior Fracture is Associated with Subsequent Fracture Risk: An Analysis of Real-World Data

September 23, 03:00 PM-03:15 PM

Valencia Ballroom A/Orange County Convention Center

### **Closing Reception**

September 23, 2019, 03:15 PM

Room TBD/Orange County Convention Center